T NO. DOT-TSC-NHTSA-78-4 HS-803 277

PERFORMANCE CHARACTERISTICS OF AUTOMOTIVE ENGINES IN THE UNITED STATES
Second Series--Report No. 3
1977 Chrysler 225 CID (3.7 Liters), 2V

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APRIL 1978

INTERIM REPORT

DOCUMENT IS AVAILABLE TO THE U.S. PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Office Of Research and Development
Washington DC 20590

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Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
HS-803 277		

4. Title and Subtitle	5. Report Date
PERFORMANCE CHARACTERISTICS OF AUTOMOTIVE ENGINES IN THE UNITED STATES Second Series--Report No. 3 1977 Chrysler 225 CID (3.7 Liters), 2V	April 1978
	6. Performing Organization Code
7. Author(s) T.W. Chamberlain, D.E. Koehler, K.R. Stamper, and W.F. Marshall	8. Performing Organization Report No. DOT-TSC-NHTSA-78-4 BERC/OP-77/48
9. Performing Organization Name and Address U.S. Department of Energy Bartlesville Energy Research Center P.O. Box 1398 Bartlesville OK 74003	10. Work Unit No. (TRAIS) HS827/R8402
	11. Contract or Grant No. RA-76-23
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Research and Development Washington DC 20590	13. Type of Report and Period Covered Interim Report August 1977
	14. Sponsoring Agency Code

15. Supplementary Notes

*Interagency agreement with: U.S. Department of Transportation
Transportation Systems Center
Kendall Square
Cambridge MA 02142

16. Abstract

Experimental data were obtained in dynamometer tests of a 1977 Chrysler 225-CID engine to determine fuel consumption and emissions (hydrocarbon, carbon monoxide, oxides of nitrogen) at steady-state engine-operating modes. The objective of the program is to obtain engine-performance data for estimating emissions and fuel economy for varied engine service and duty. The intent of the work is to provide basic engine characteristic data required as input for engineering calculations involving ground transportation.

17. Key Words	18. Distribution Statement
Fuel Economy Auto Emissions	DOCUMENT IS AVAILABLE TO THE U.S. PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	62	

PREFACE

This report, prepared by the U.S. Department of Energy, Bartlesville Energy Research Center, for the U.S. Department of Transportation, Transportation Systems Center, Energy Technology Branch, Cambridge MA, presents results of experimental work to obtain information on performance characteristics of an engine used in automobiles sold in the United States. The engine used in this work is one of a series of 10 engines to be tested in the current program. This is the third of the reports to be published covering work with those engines.

This project is funded by the National Highway Traffic Safety Administration, Office of Research and Development, Office of Passenger Vehicle Research, Technology Assessment Division.

Ralph G. Colello and James A. Kidd, Jr., of the U.S. Department of Transportation, Transportation Systems Center are the technical monitors.

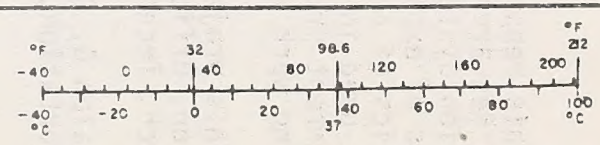
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



1. INTRODUCTION

Data acquired from steady-state tests of a 1977 Chrysler 225-cubic-inch-displacement engine are presented in this report. The test results are sufficient to establish maps of fuel consumption and emissions of carbon monoxide, unburned hydrocarbons, and oxides of nitrogen over the operating range of the engine.

The Chrysler 225-CID engine is one of a series of 10 engines to be tested in the current program. The steady-state maps of emissions and fuel economy generated by this study may be used to predict engine and emission control system performance for transient operation.

2. ENGINE TEST REPORT

A new mean-tolerance 1977 Chrysler 225-CID engine was acquired for this series of tests. The engine was mounted on a test stand and coupled to an eddy-current dynamometer. All engine accessories were included in the test-stand installation except for the cooling fan and radiator. An alternator was mounted on the engine but was not connected to the electrical system. Emission control systems included exhaust-gas recirculation (EGR) and an oxidation catalyst. Table 1 contains the manufacturer's general specifications for the Chrysler 225-CID engine.

Prior to the start of the testing program, the engine was broken in at speeds and power settings comparable with normal vehicle operation. Table 2 contains details of the break-in schedule that was used. A single batch of unleaded, regular grade gasoline was used for the entire break-in period and test program. An analysis of the fuel appears in table 3.

Steady-state tests of the engine were made at the speed and load points indicated in table 4. The following data items were recorded at each test point:

Test number
Date
Barometric pressure, mm Hg
Dew point, °F
Inlet air temperature, °F
Speed, rpm
Torque, lb-ft -- BLH strain gage load cell; Daytronics indicator
Fuel rate, lb/hr -- Fluidyne positive displacement fuel flowmeter
Ignition timing, °BTC
Manifold vacuum, in. Hg
Throttle Angle, deg
CO, pct -- Beckman NDIR
CO_2, pct -- Beckman NDIR
O_2, pct -- Beckman polarographic detector
HC, ppmC -- Custom-built heated flame ionization detector
NO_x, ppm -- Thermo-Electron chemiluminescent detector
Oil temperature, °F
Oil pressure, psig
Coolant temperature, °F
Exhaust temperature, °F
Exhaust pressure, in. H_2O
Intake manifold temperature, °F.

The following equations were used in calculating power, air/fuel ratio, absolute humidity, and mass emission rates of carbon monoxide (CO), unburned hydrocarbons (HC), and oxides of nitrogen (NO_x):

1. Partial pressure of water vapor in intake air (millimeters of mercury):

$$P = \exp\left[18.717 - \frac{7308.1}{393 + D}\right],$$

where D = dewpoint, °F.

2. Absolute humidity (grains moisture per pound dry air):

$$H = \frac{4347.8(P)}{B - P},$$

where B = barometric pressure, mm Hg.

3. Humidity correction factor (dimensionless):

$$K_H = \frac{1}{1 - 0.0047(H - 75)}.$$

Note: This factor is used to correct the NO_x mass emission rate to a standard humidity of 75 grains moisture per pound dry air.

4. Stoichiometric air/fuel ratio (dimensionless):

$$AF_s = \frac{69(2 + \frac{x}{2} - y)}{MW_{fuel}},$$

where x = hydrogen-carbon atomic ratio of fuel
y = oxygen-carbon atomic ratio of fuel
MW_{fuel} = fuel molecular weight per carbon atom
= 12.01115 + 1.00797x + 15.9994y.

5. Hydrogen concentration in raw exhaust (percent):

$$H_2 = \frac{x(CO)(CO + CO_2)}{2(CO + 3CO_2)},$$

where CO = carbon monoxide concentration (percent)
CO_2 = carbon dioxide concentration (percent).

Note: This equation assumes a water-gas shift equilibrium constant

$$\frac{(CO)(H_2O)}{(CO_2)(H_2)} = 3 \ .$$

6. Correction factor for emission concentrations from wet basis to dry basis (dimensionless):

$$C_w = 1 + \frac{(\frac{x}{2})(CO + CO_2) - H_2}{100} \ .$$

Note: In these tests, only HC is measured on a wet basis. All other species are measured on a dry basis.

7. Air/fuel ratio (dimensionless):

$$AF = \frac{AF_s}{2 + \frac{x}{2} - y}\left[\frac{(1 + \frac{x}{2} - y)(CO) + (2 + \frac{x}{2} - y)(CO_2) + 2(O_2) + \frac{NO_x}{10^4} - H_2}{CO + CO_2 + C_w(\frac{HC}{10^4})}\right],$$

where O_2 = oxygen concentration (percent)
NO_x = oxides of nitrogen (ppm)
HC = unburned hydrocarbon concentration (ppmC).

8. Exhaust flow (pounds per hour):

$$M_{EX} = \frac{M_F(1 + AF)}{C_w}$$

where M_F = fuel flow rate (pounds per hour).

9. Carbon monoxide mass emission rate (grams per hour):

$$M_{CO} = M_{EX}(\frac{CO}{100})(\frac{MW_{CO}}{MW_{EX}})453.59237,$$

where MW_{CO} = molecular weight of CO (=28.01115)
MW_{EX} = molecular weight of exhaust gas (=28.967).

10. Unburned hydrocarbon mass emission rate (grams per hour):

$$M_{HC} = M_{EX}(\frac{HC}{10^6})(\frac{MW_{HC}}{MW_{EX}})C_w\ 453.59237,$$

where MW_{HC} = molecular weight per carbon atom of HC
= 12.01115 + 1.00797x + 15.9994y.

11. Oxides of nitrogen mass emission rate (grams per hour):

$$M_{NO_x} = M_{EX}\left(\frac{NO_x}{10^6}\right)\left(\frac{MW_{NO_x}}{MW_{EX}}\right)(K_H)453.59237\,,$$

where MW_{NO_x} = molecular weight of NO_2 (=46.0028).

12. Power (brake horsepower corrected to a standard barometric pressure of 736.6 mm Hg and a standard temperature of 85° F):

$$HP = \frac{N(T)}{5252.113}\left(\frac{736.6}{B - P}\right)\sqrt{\frac{t + 460}{545}}\,,$$

where N = engine speed (revolutions per minute)
T = brake torque (foot-pounds)
t = air temperature (°F).

3. DISCUSSION OF TEST RESULTS

The maximum torque and power outputs measured in these tests were in agreement with the manufacturer's specifications. Emission rates of CO, HC, and NO_x were typical of modern engines equipped with exhaust-gas-recirculation (EGR) systems and oxidation catalysts. The carburetor was set to provide a fuel-lean mixture during low-power operating, enabling the catalyst to control CO and HC effectively. (See Figure 1.) At higher-power levels, the air-fuel ratio tended to decrease (figure 2) resulting in less effective catalytic treatment of CO and HC. (See Figures 3 and 4.) Oxides of nitrogen emissions increased at higher power levels (figure 5). Fuel flow is shown in figure 6.

The data presented in this report are sufficient to establish steady-state maps of fuel consumption and emission rates for the 1977 Chrysler 225-CID engine.

4. CONCLUSIONS

The purpose of the experimental work reported here is to establish fuel consumption and emission rate data for this engine. Those data are presented in the tables accompanying this report.

TABLE 1. MANUFACTURER'S ENGINE SPECIFICATIONS

Displacement, cu. in.	225
Maximum horsepower, bhp @ 3,600 rpm	109
Maximum torque, lb-ft @ 2,000 rpm	182
Bore and stroke, in.	3.40 X 4.125
Configuration	inline slant 6-cylinder
Compression ratio	8.40:1
Firing order	1-5-3-6-2-4
Ignition timing at idle speed, BTDC @ 700 rpm	12
Block material	cast iron
Head material	cast iron
Number of crankshaft main bearings	4
Number of compression rings/piston	2
Number of oil rings/piston	1
Cam drive type	chain and sprocket
Valve lift:	
Intake, in.	0.406
Exhaust, in.	0.414
Valve timing:	
Intake opens, °BTC	16
Intake closes, °ABC	48
Exhaust opens, °BBC	54
Exhaust closes, °ATC	10
Spark plug gap, in.	0.035
Exhaust-gas-recirculation system:	
Valve type	poppet
Control signal	amplified venturi vacuum
Point of discharge	intake manifold
Crankcase emission control:	
Control method	positive crankcase ventilation
Point of discharge	intake manifold
Carburetor type	2 barrel downdraft
Distributor specifications:	
Centrifugal advance, begins, ° @ 550 rpm	0
Centrifugal advance, intermediate, °@ 650 rpm.	2-1/2
Centrifugal advance, full, ° @ 1,900 rpm	4
Vacuum advance, begins, ° @ 7 in. Hg	0
Vacuum advance, maximum, ° @ 9.5 in. Hg	11
Carburetor number	BBD80875
Distributor number	3874929

TABLE 2. ENGINE BREAK-IN SCHEDULE

Simulated vehicle speed, mph	Engine speed, rpm	Manifold vacuum, in. Hg	Fraction of time in mode, hr.
0	Idle	19.5	1/10
20	900	16.5	"
30	1,250	14.5	"
40	1,550	14.0	"
50	2,000	7.5	"
60	2,400	5.0	"
25	1,100	16.0	"
35	1,400	14.0	"
45	1,800	9.0	"
55	2,200	6.5	"

Mileage per cycle = 90.
Total mileage accumulated over 40-hour break-in period = 1,440.

TABLE 3. FUEL ANALYSIS

Fuel No.	7619
Research octane No.	91.5
Motor octane No.	83.5
Specific gravity	0.7161
API gravity, degrees	66.1
Distillation, °F:	
10 pct evaporated	128
50 pct "	218
95 pct "	404
100 pct "	417
Reid vapor pressure, psig	9.5
FIA analysis, pct:	
Aromatics	6
Olefins	17
Paraffins	77
Sulfur, pct	0.024
Lead, grams per gallon	Trace
Hydrogen/carbon atomic ratio	2.040
Oxygen/carbon atomic ratio	0.000

TABLE 4. TEST-NUMBER CROSS-REFERENCE INDEX

Pct Full Load	Engine Speed, rpm									
	650	750	1,000	1,300	1,700	2,000	2,500	3,000	3,300	3,600
0		1 70	13 79	21 84	29 89	37 94	45 99	53 104	61 109	69 114
10			12	20	28	36	44	52	60	68
25			11 78	19 83	27 88 117	35 93	43 98	51 103	59 108	67 113
40		2 71	10 77	18 82	26 87 116	34 92	42 97	50 102	58 107	66 112
60	4 73		9 76	17 81	25 86	33 91 119	41 96	49 101	57 106	65 111
75			8 75	16 80	24 85 115	32 90 118	40 95	48 100	56 105	64 110
90			7	15	23	31	39	47	55	63
100	5 74	3 72	6	14	22	30	38	46	54	62

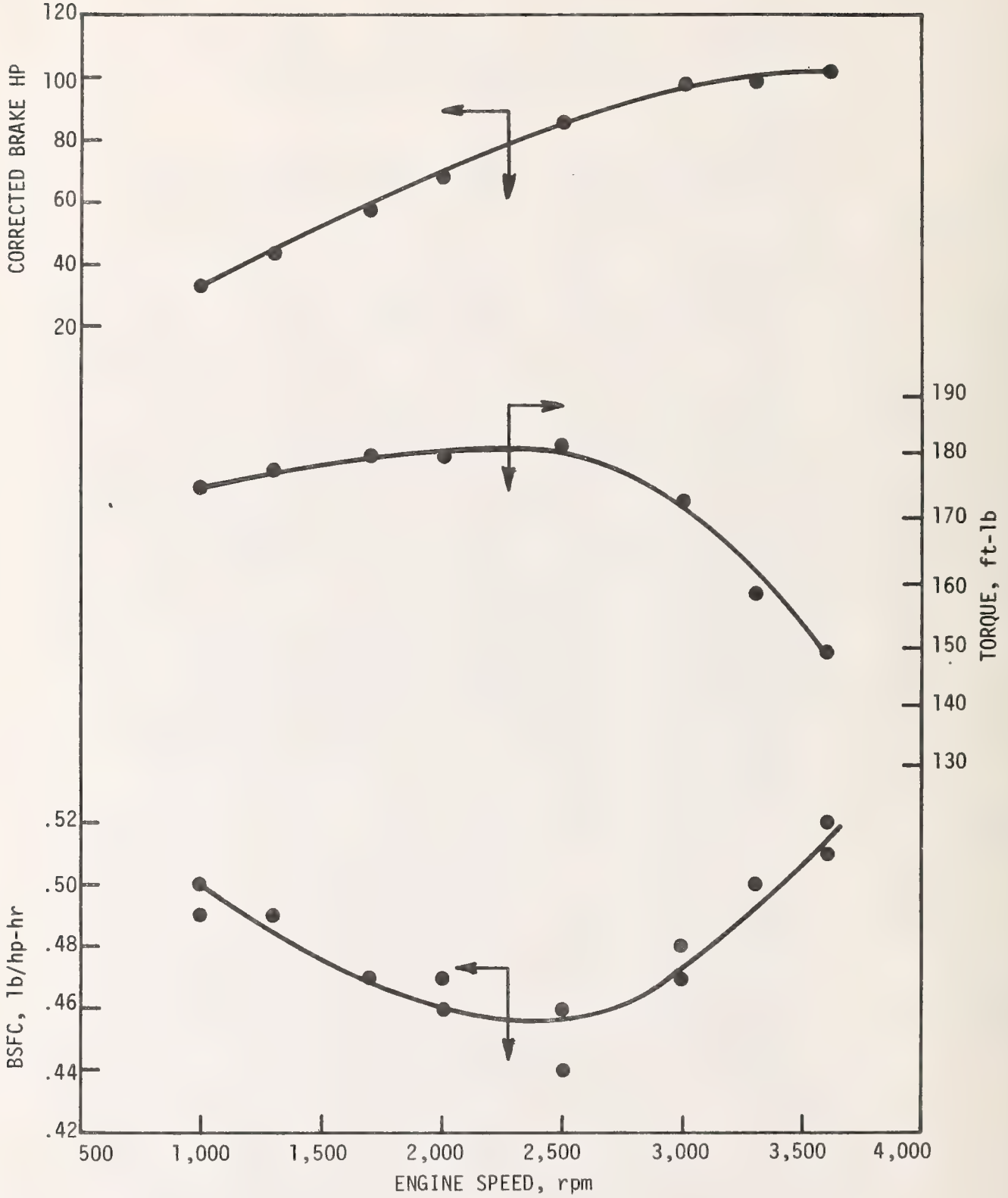


FIGURE 1. Brake Specific Fuel Consumption, Torque, and Brake Horsepower versus Engine rpm at Wide-Open-Throttle--Chrysler 225-CID Engine.

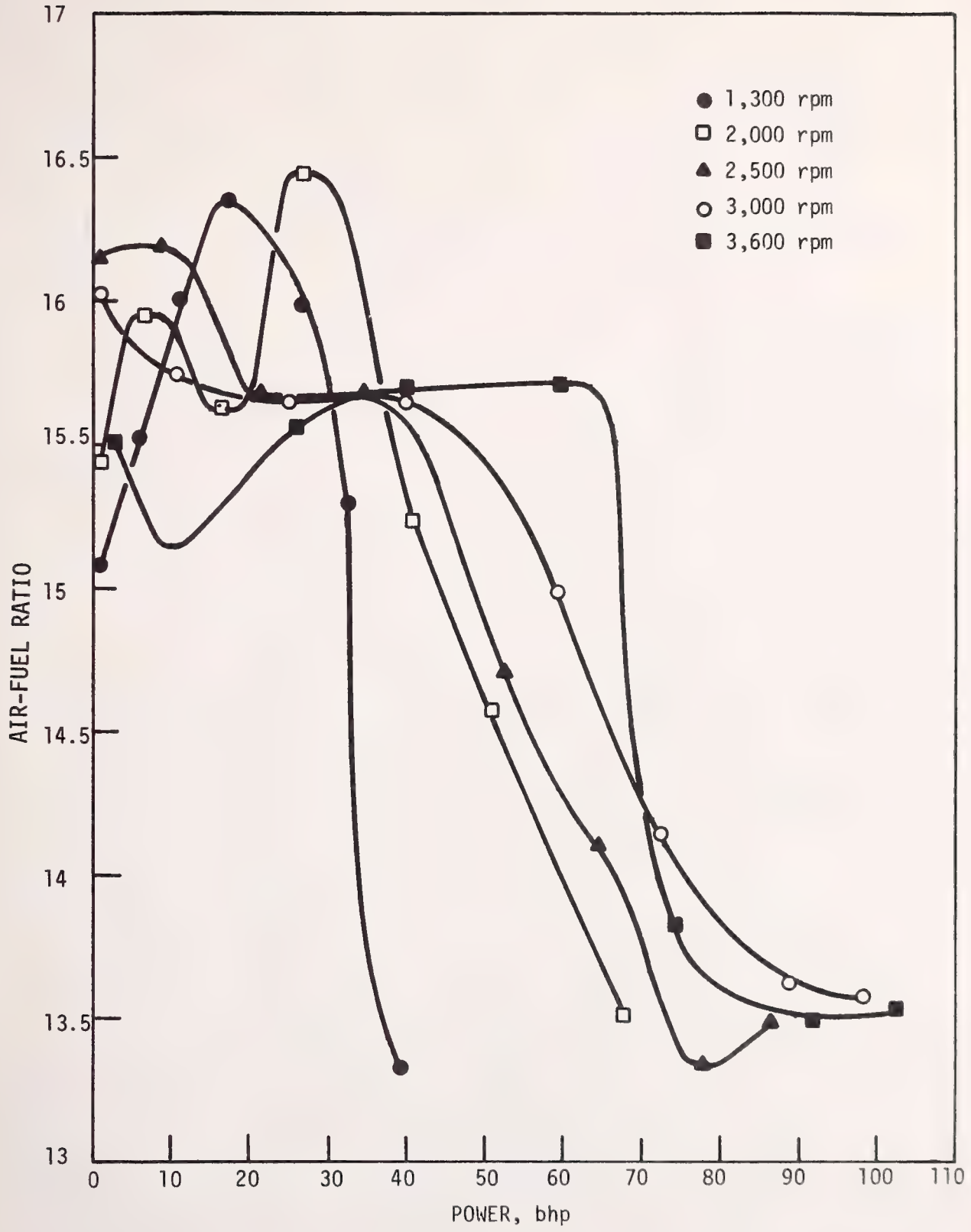


FIGURE 2. Air Fuel Ratio versus Power at Various Speed and Load Conditions--Chrysler 225-CID Engine.

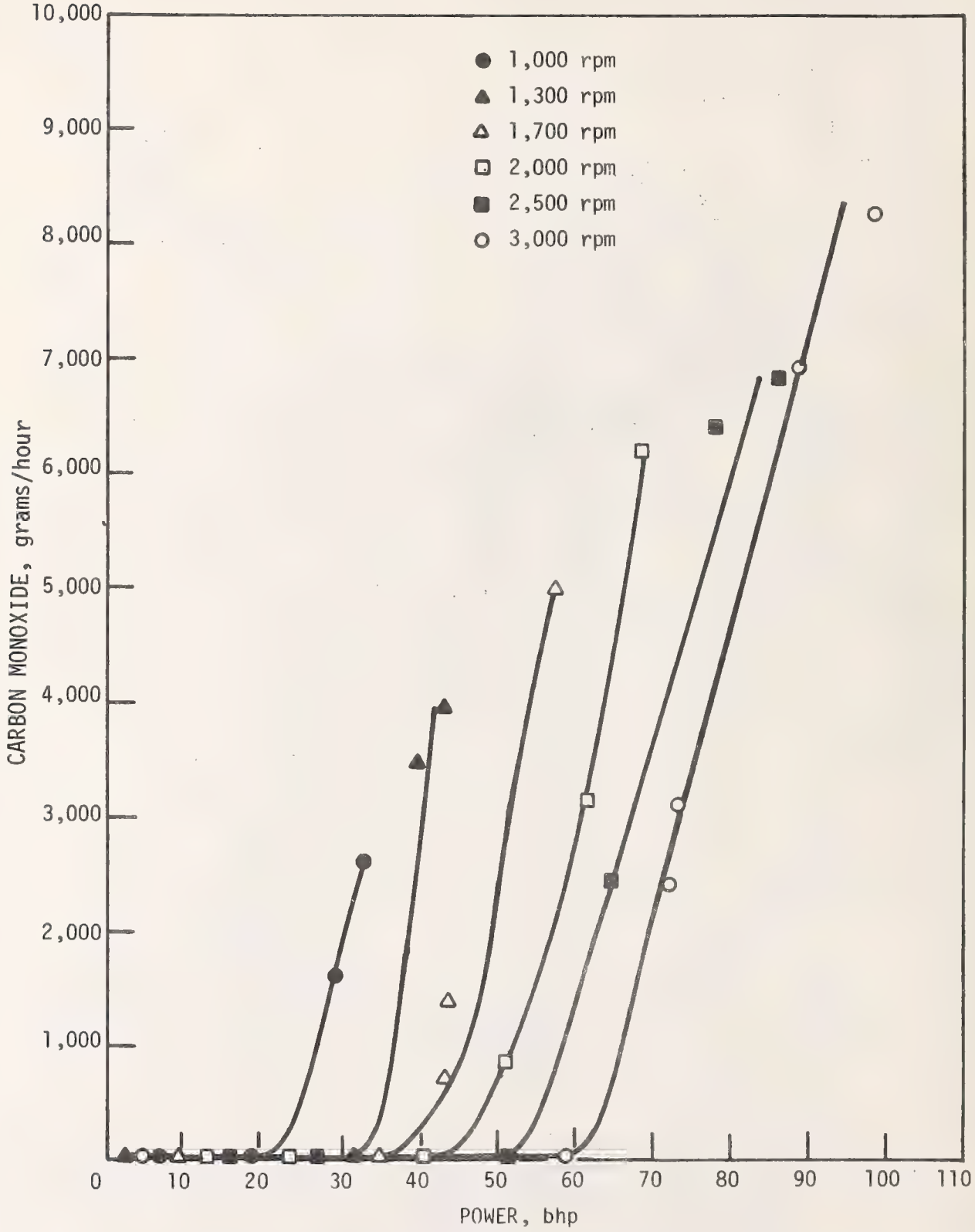


FIGURE 3. Carbon Monoxide Emissions versus Power at Various Speed and Load Conditions--Chrysler 225-CID Engine.

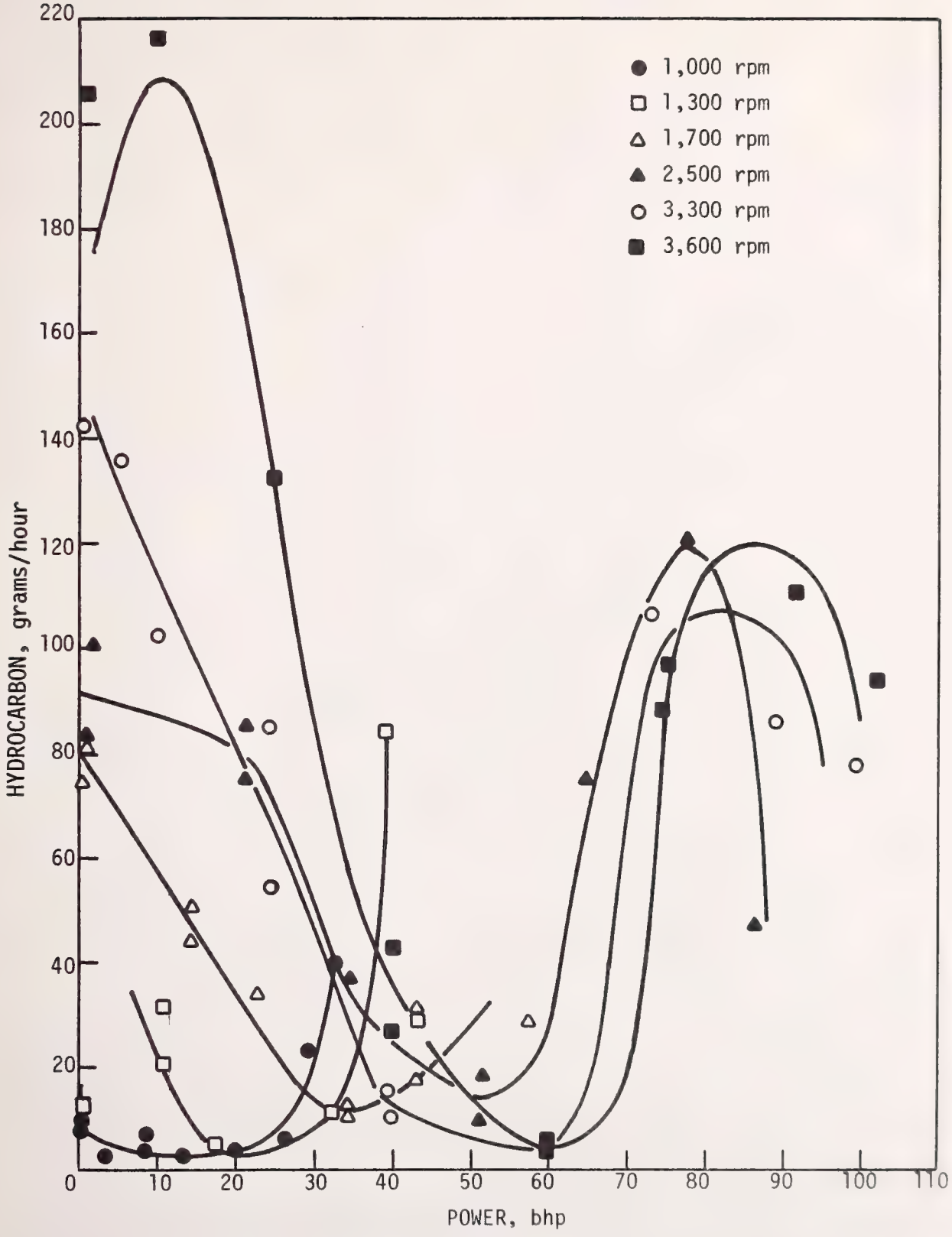


FIGURE 4. Hydrocarbon Emissions versus Power at Various Speed and Load Conditions-- Chrysler 225-CID Engine.

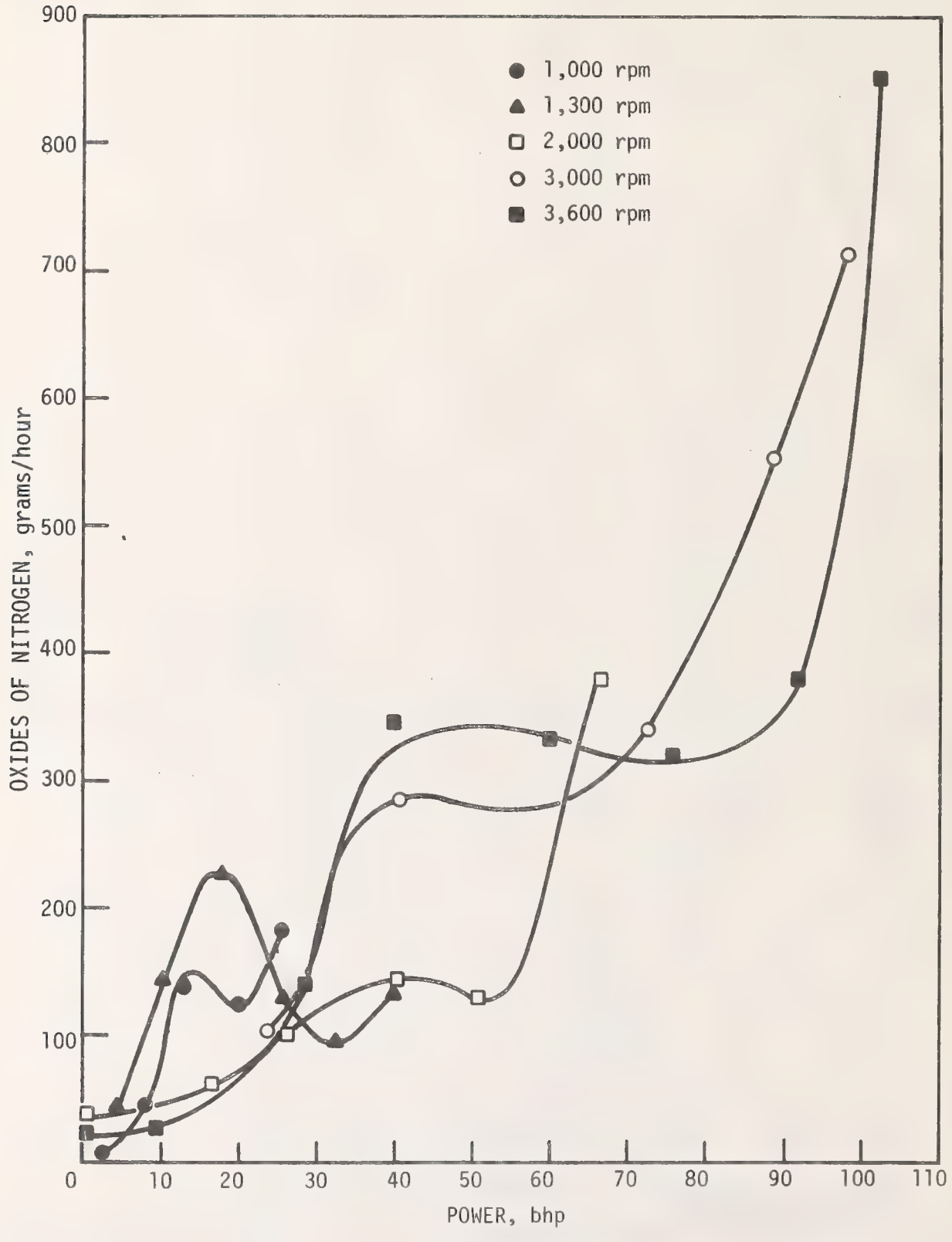


FIGURE 5. Oxides of Nitrogen Emissions versus Power at Various Speed and Load Conditions-- Chrysler 225-CID Engine.

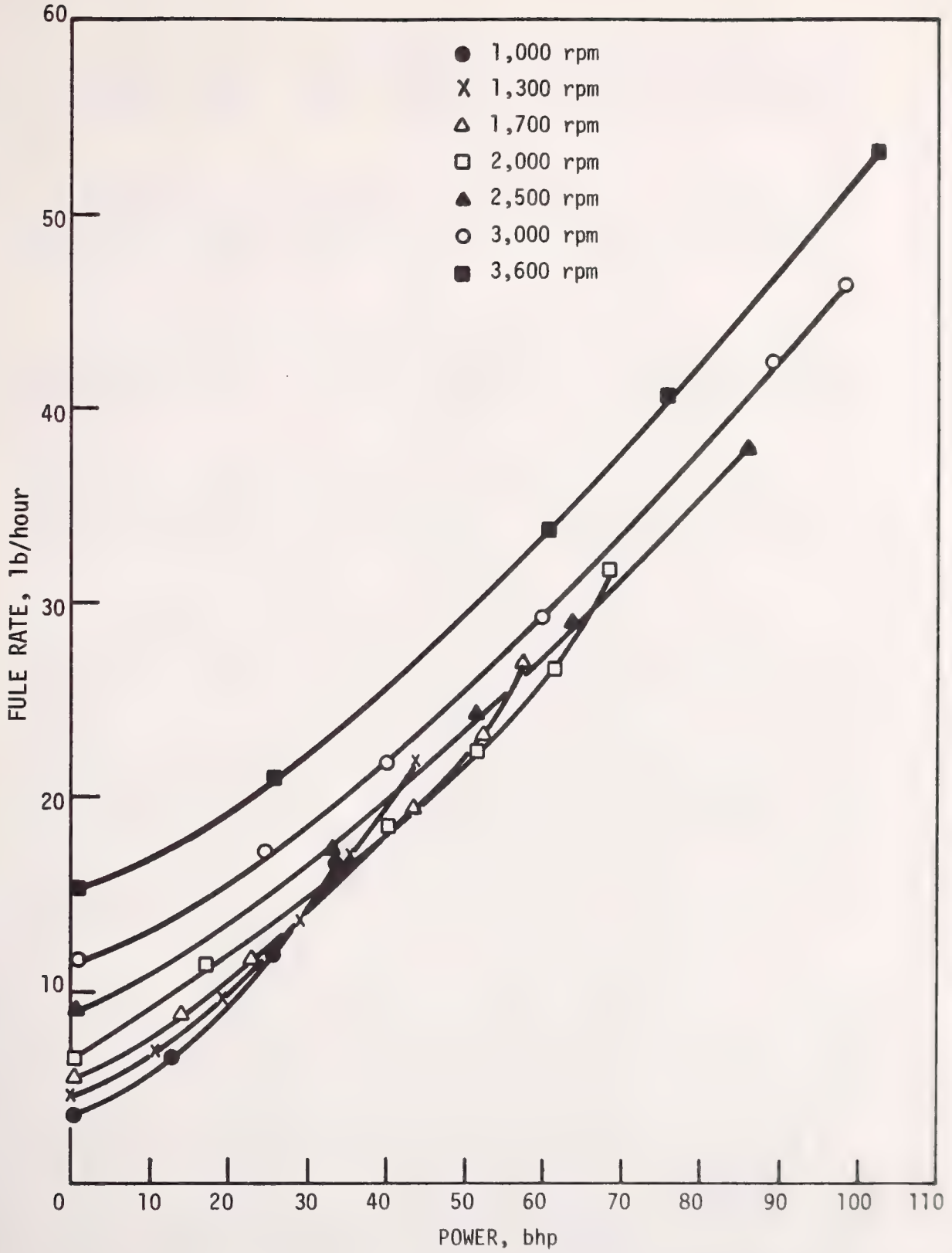


FIGURE 6. Fuel Rate at Various Speed and Load Conditions--Chrysler 225-CID Engine.

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	1.1	1.2	2.1	2.2	3.1	3.2
TEST DATE	4/28/77	4/28/77	4/29/77	4/29/77	4/29/77	4/29/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	754.6	754.6	741.5	741.5	741.5	741.5
HUMIDITY, GRAINS/LB	65	65	69	69	69	69
TEMPERATURE, F	74	77	72	72	72	72
ENGINE SPEED, RPM	750	750	750	750	750	750
TORQUE, FT-LB	2.0	2.0	15.0	15.0	30.0	30.0
POWER, BHP*	.3	.3	2.1	2.1	4.3	4.3
FUEL RATE, LB/HR	2.8	2.7	3.5	3.3	4.6	4.6
IGNITION TIMING, DEG BTDC	12.0	12.0	12.0	12.0	12.0	12.0
MANIFOLD VACUUM, IN HG	20.0	20.0	19.5	19.5	17.0	17.0
THROTTLE ANGLE, DEG	.0	.0	1.0	1.0	1.0	1.0
INTAKE MAN. TEMP., F	193	193	174	174	172	172
CONCENTRATIONS, DRY BASIS						
CO, %	.3701	.0216	.5500	.0263	.4995	.0145
CO2, %	11.66	13.14	13.01	13.67	12.50	13.14
O2, %	3.88	2.05	1.63	1.25	2.50	1.88
HC, PPMC	10373	1021	3409	627	1696	181
NOX, PPM	37	58	145	135	395	355
AIR/FUEL RATIO	16.36	16.21	15.34	15.63	16.25	16.20
EMISSION RATES, G/HR						
CO	69.9	3.9	120.3	5.6	155.0	4.5
HC	98.4	9.3	37.5	6.7	26.4	2.8
NOX+	1.1	1.7	5.1	4.6	19.6	17.5
OIL TEMPERATURE, F	185	185	187	187	186	186
OIL PRESSURE, PSI	45	45	45	45	45	45
COOLANT TEMPERATURE, F	170	170	174	174	172	172
EXHAUST PRESSURE, IN. H2O	1.0	.0	1.0	.0	1.0	1.0
EXHAUST TEMPERATURE, F	631	737	634	691	656	625

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	4.1	4.2	5.1	5.2	6.1	6.2
TEST DATE	4/11/77	4/11/77	4/11/77	4/11/77	4/12/77	4/12/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	747.0	747.0	747.0	747.0	750.0	750.0
HUMIDITY, GRAINS/LB	49	49	49	49	52	52
TEMPERATURE, F	72	72	72	72	85	85
ENGINE SPEED, RPM	650	650	650	650	1000	1000
TORQUE, FT-LB	19.0	19.0	30.0	30.0	174.0	174.0
POWER, BHP*	2.3	2.3	3.7	3.7	32.9	32.9
FUEL RATE, LB/HR	2.5	2.6	3.2	3.2	16.5	16.2
IGNITION TIMING, DEG BTDC	12.0	12.0	10.0	10.0	10.0	10.0
MANIFOLD VACUUM, IN HG	18.0	18.0	17.5	17.5	.5	.5
THROTTLE ANGLE, DEG	.0	.0	.0	.0	67.0	67.0
INTAKE MAN. TEMP., F	172	172	157	157	118	118
CONCENTRATIONS, DRY BASIS						
CO, %	.6816	.0580	.7950	.6364	3.2647	2.7875
CO2, %	12.75	13.10	12.50	12.50	11.44	12.35
O2, %	2.25	1.88	2.50	2.50	1.55	.74
HC, PPMC	3177	2438	2804	2745	1990	846
NOX, PPM	110	110	185	195	1800	900
AIR/FUEL RATIO	15.75	15.90	15.93	16.03	14.19	13.99
EMISSION RATES, G/HR						
CO	111.4	9.8	165.9	134.2	3159.3	2596.9
HC	26.1	20.6	29.4	29.1	96.7	39.6
NOX+	2.6	2.7	5.7	6.0	258.2	124.3
OIL TEMPERATURE, F	181	182	181	181	200	200
OIL PRESSURE, PSI	15	15	15	15	21	21
COOLANT TEMPERATURE, F	172	172	172	172	175	180
EXHAUST PRESSURE, IN. H2O	1.0	1.0	1.0	1.0	13.0	4.0
EXHAUST TEMPERATURE, F	652	551	458	366	1199	991

* COPRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	7.1	7.2	8.1	8.2	9.1	9.2
TEST DATE	4/28/77	4/28/77	4/12/77	4/12/77	4/12/77	4/12/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	754.6	754.6	750.0	750.0	750.0	750.0
HUMIDITY, GRAINS/LB	65	65	52	52	52	52
TEMPERATURE, F	78	78	74	75	75	75
ENGINE SPEED, RPM	1000	1000	1000	1000	1000	1000
TORQUE, FT-LB	156.0	156.0	131.0	131.0	104.0	104.0
POWER, BHP*	29.2	29.2	24.5	24.6	19.5	19.5
FUEL RATE, LB/HR	13.7	13.7	11.5	11.5	9.0	9.5
IGNITION TIMING, DEG BTDC	11.5	11.0	12.0	12.0	17.0	17.0
MANIFOLD VACUUM, IN HG	1.0	1.0	2.5	2.5	6.5	6.5
THROTTLE ANGLE, DEG	31.0	31.0	16.5	16.5	8.0	8.0
INTAKE MAN. TEMP., F	186	186	154	162	160	160
CONCENTRATIONS, DRY BASIS						
CO, %	2.6885	2.0330	.1890	.0145	.0561	.0097
CO2, %	12.25	13.27	12.75	13.01	12.13	12.25
O2, %	.98	.18	2.40	2.05	3.40	3.15
HC, PPMC	1713	574	1273	142	1068	96
NOX, PPM	1088	650	1400	1450	1200	1120
AIR/FUEL RATIO	14.11	14.00	16.43	16.39	17.42	17.36
EMISSION RATES, G/HR						
CO	2131.9	1599.9	147.0	11.2	36.3	6.6
HC	68.2	22.7	49.7	5.5	34.7	3.3
NOX+	135.4	80.3	161.5	165.8	115.0	112.8
OIL TEMPERATURE, F	201	201	207	206	206	206
OIL PRESSURE, PSI	40	40	23	23	21	21
COOLANT TEMPERATURE, F	177	177	177	172	174	174
EXHAUST PRESSURE, IN. H2O	10.0	6.0	10.0	4.0	8.0	2.0
EXHAUST TEMPERATURE, F	986	982	951	874	870	785

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	10.1	10.2	11.1	11.2	12.1	12.2
TEST DATE	4/12/77	4/12/77	4/12/77	4/12/77	4/12/77	4/12/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	750.0	750.0	750.0	750.0	748.0	748.0
HUMIDITY, GRAINS/LB	52	52	52	52	52	52
TEMPERATURE, F	75	75	74	74	78	78
ENGINE SPEED, RPM	1000	1000	1000	1000	1000	1000
TORQUE, FT-LB	70.0	70.0	44.0	44.0	17.0	17.0
POWER, BHP*	13.1	13.1	8.2	8.2	3.2	3.2
FUEL RATE, LB/HR	6.6	6.4	5.0	5.1	4.1	4.0
IGNITION TIMING, DEG BTDC	31.0	31.0	25.5	25.5	10.5	10.5
MANIFOLD VACUUM, IN HG	13.0	13.0	17.0	17.0	.0	.0
THROTTLE ANGLE, DEG	5.0	5.0	3.0	3.0	2.0	2.0
INTAKE MAN. TEMP., F	146	146	158	158	177	177
CONCENTRATIONS, DRY BASIS						
CO, %	.3189	.0145	.7380	.0378	.6100	.0378
CO2, %	12.25	12.75	12.25	13.01	12.25	13.01
O2, %	2.80	2.35	2.65	1.90	2.65	1.95
HC, PPMC	1465	124	1751	204	1806	204
NOX, PPM	2500	2100	1300	1225	150	140
AIR/FUEL RATIO	16.73	16.68	16.27	16.24	16.30	16.24
EMISSION RATES, G/HR						
CO	144.3	6.3	245.3	12.8	167.7	10.1
HC	33.3	2.7	29.2	3.5	24.9	2.7
NOX+	167.7	135.7	64.1	61.5	6.1	5.5
OIL TEMPERATURE, F	205	205	200	200	195	195
OIL PRESSURE, PSI	24	24	23	23	24	24
COOLANT TEMPERATURE, F	178	178	176	178	180	180
EXHAUST PRESSURE, IN. H2O	4.0	1.0	2.0	1.0	1.0	.0
EXHAUST TEMPERATURE, F	747	695	668	706	601	638

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	13.1	13.2	14.1	14.2	15.1	15.2
TEST DATE	4/12/77	4/12/77	4/12/77	4/12/77	4/29/77	4/29/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	748.0	748.0	748.0	748.0	741.5	741.5
HUMIDITY, GRAINS/LB	52	52	52	52	69	69
TEMPERATURE, F	75	75	77	77	72	72
ENGINE SPEED, RPM	1000	1000	1300	1300	1300	1300
TORQUE, FT-LB	.0	.0	177.0	177.0	159.0	159.0
POWER, BHP*	.0	.0	43.3	43.3	39.2	39.2
FUEL RATE, LB/HR	3.4	3.3	21.1	21.4	18.8	18.9
IGNITION TIMING, DEG BTDC	10.5	10.5	16.5	16.5	17.0	17.0
MANIFOLD VACUUM, IN HG	21.0	21.0	.4	.4	1.0	1.0
THROTTLE ANGLE, DEG	1.0	1.0	67.0	67.0	32.0	32.0
INTAKE MAN. TEMP., F	182	182	104	104	164	164
CONCENTRATIONS, DRY BASIS						
CO, %	.4720	.0263	3.9080	3.2260	3.5077	3.3437
CO2, %	11.78	12.88	10.70	11.78	12.25	12.50
O2, %	3.20	2.50	2.08	.80	.27	.20
HC, PPMC	5617	679	1726	468	1835	1608
NOX, PPM	71	70	1850	750	963	988
AIR/FUEL RATIO	16.37	16.61	14.25	13.84	13.33	13.39
EMISSION RATES, G/HR						
CO	108.4	6.0	4869.3	3938.9	3608.8	3466.2
HC	64.8	7.8	108.0	28.7	94.8	83.7
NOX+	2.4	2.4	342.0	135.9	158.7	164.1
OIL TEMPERATURE, F	194	194	198	198	194	194
OIL PRESSURE, PSI	24	24	29	29	50	50
COOLANT TEMPERATURE, F	174	174	175	175	172	172
EXHAUST PRESSURE, IN. H2O	1.0	.0	26.0	11.0	15.0	8.0
EXHAUST TEMPERATURE, F	611	646	1210	1075	1025	885

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	16.1	16.2	17.1	17.2	18.1	18.2
TEST DATE	4/12/77	4/12/77	4/12/77	4/12/77	4/12/77	4/12/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.7	746.7	746.7	746.7	746.7	746.7
HUMIDITY, GRAINS/LB	56	56	56	56	56	56
TEMPERATURE, F	74	74	74	74	74	74
ENGINE SPEED, RPM	1300	1300	1300	1300	1300	1300
TORQUE, FT-LB	133.0	133.0	106.0	106.0	71.0	71.0
POWER, BHP*	32.6	32.6	26.0	26.0	17.4	17.4
FUEL RATE, LB/HR	14.9	15.2	12.1	12.1	8.7	8.7
IGNITION TIMING, DEG BTDC	16.0	16.0	16.0	16.0	38.0	38.0
MANIFOLD VACUUM, IN HG	2.5	2.5	5.5	5.5	12.0	12.0
THROTTLE ANGLE, DEG	16.0	16.0	11.0	11.0	5.0	5.0
INTAKE MAN. TEMP., F	165	166	197	197	166	166
CONCENTRATIONS, DRY BASIS						
CO, %	.7380	.1108	.0677	.0024	.0049	.0024
CO2, %	12.88	13.80	13.01	13.14	12.75	12.88
O2, %	1.45	.75	1.75	1.75	2.13	1.88
HC, PPMC	1534	234	1246	147	1328	164
NOX, PPM	963	550	988	1000	2450	2300
AIR/FUEL RATIO	15.36	15.28	15.98	16.14	16.37	16.31
EMISSION RATES, G/HR						
CO	694.8	105.6	53.8	2.0	2.9	1.4
HC	72.5	11.2	49.7	5.9	39.3	4.8
NOX+	137.2	79.3	118.8	121.0	218.3	203.7
OIL TEMPERATURE, F	180	181	203	204	207	206
OIL PRESSURE, PSI	34	34	30	30	30	30
COOLANT TEMPERATURE, F	175	176	168	167	175	175
EXHAUST PRESSURE, IN. H2O	15.0	5.0	11.0	4.0	5.0	1.0
EXHAUST TEMPERATURE, F	985	902	1033	906	865	767

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	19.1	19.2	20.1	20.2	21.1	21.2
TEST DATE	4/28/77	4/28/77	4/12/77	4/12/77	4/12/77	4/12/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	742.0	742.0	746.7	746.7	746.7	746.7
HUMIDITY, GRAINS/LB	64	64	56	56	56	56
TEMPERATURE, F	75	75	74	74	74	74
ENGINE SPEED, RPM	1300	1300	1300	1300	1300	1300
TORQUE, FT-LB	44.0	44.0	18.0	18.0	5.0	5.0
POWER, BHP*	10.9	10.9	4.4	4.4	1.2	1.2
FUEL RATE, LB/HR	6.8	6.9	5.6	5.6	4.8	4.9
IGNITION TIMING, DEG BTDC	36.0	36.0	38.0	38.0	16.0	16.0
MANIFOLD VACUUM, IN HG	16.0	16.0	19.5	19.5	21.0	21.0
THROTTLE ANGLE, DEG	4.0	4.0	2.0	2.0	.0	.0
INTAKE MAN. TEMP., F	175	175	152	152	159	160
CONCENTRATIONS, DRY BASIS						
CO, %	.1465	.0240	1.0120	.0073	1.0890	.5333
CO2, %	12.88	13.53	11.55	13.53	12.75	13.53
O2, %	2.38	1.63	3.25	1.23	1.50	.88
HC, PPMC	5096	911	13494	1707	1706	970
NOX, PPM	2350	2050	750	780	102	60
AIR/FUEL RATIO	15.99	15.95	15.21	15.53	15.17	15.07
EMISSION RATES, G/HR						
CO	66.0	10.8	357.9	2.6	327.7	160.5
HC	115.2	20.6	239.7	30.6	25.8	14.7
NOX+	165.9	144.9	40.1	42.1	4.6	2.7
OIL TEMPERATURE, F	201	201	204	203	186	186
OIL PRESSURE, PSI	50	50	30	30	37	37
COOLANT TEMPERATURE, F	174	174	170	169	168	168
EXHAUST PRESSURE, IN. H2O	2.0	2.0	2.0	1.0	1.0	:0
EXHAUST TEMPERATURE, F	764	752	755	765	651	585

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	22.1	22.2	23.1	23.2	24.1	24.2
TEST DATE	4/12/77	4/12/77	4/12/77	4/12/77	5/ 4/77	5/ 4/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.7	746.7	746.7	746.7	737.5	737.5
HUMIDITY, GRAINS/LB	56	56	56	56	63	63
TEMPERATURE, F	76	76	76	76	77	77
ENGINE SPEED, RPM	1700	1700	1700	1700	1700	1700
TORQUE, FT-LB	179.0	179.0	161.0	161.0	134.0	134.0
POWER, BHP*	57.4	57.4	51.6	51.6	43.6	43.6
FUEL RATE, LB/HR	27.0	26.8	22.4	22.5	20.3	19.3
IGNITION TIMING, DEG BTDC	19.0	19.0	19.0	19.0	16.5	16.5
MANIFOLD VACUUM, IN HG	.5	.5	2.5	2.5	1.7	1.7
THROTTLE ANGLE, DEG	67.0	67.0	26.0	26.0	27.0	27.0
INTAKE MAN. TEMP., F	108	108	119	118	237	237
CONCENTRATIONS, DRY BASIS						
CO, %	3.8624	3.3040	1.3719	.8964	1.7465	1.2365
CO2, %	11.33	12.02	13.01	13.67	13.01	13.53
O2, %	1.13	.50	.75	.50	.45	.10
HC, PPMC	1054	377	1085	263	1602	458
NOX, PPM	1800	1050	2300	1150	1200	850
AIR/FUEL RATIO	13.75	13.66	14.65	14.75	14.20	14.30
EMISSION RATES, G/HR						
CO	5925.0	4986.6	1851.2	1217.5	2064.9	1396.4
HC	81.2	28.6	73.5	18.0	95.1	26.0
NOX+	417.8	239.8	469.6	236.3	221.3	149.7
OIL TEMPERATURE, F	224	224	229	231	242	242
OIL PRESSURE, PSI	35	35	35	35	45	45
COOLANT TEMPERATURE, F	171	171	170	170	186	186
EXHAUST PRESSURE, IN. H2O	39.0	20.0	28.0	13.0	21.0	13.0
EXHAUST TEMPERATURE, F	1226	1183	1146	1101	1175	1052

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	25.1	25.2	26.1	26.2	27.1	27.2
TEST DATE	4/12/77	4/12/77	4/22/77	4/22/77	4/28/77	4/28/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.7	746.7	745.6	745.6	742.0	742.0
HUMIDITY, GRAINS/LB	56	56	53	53	64	64
TEMPERATURE, F	76	76	74	74	74	74
ENGINE SPEED, RPM	1700	1700	1700	1700	1700	1700
TORQUE, FT-LB	107.4	107.4	71.0	71.0	45.0	45.0
POWER, BHP*	34.5	34.5	22.7	22.7	14.5	14.5
FUEL RATE, LB/HR	16.3	16.3	11.8	11.6	9.0	9.1
IGNITION TIMING, DEG BTDC	18.0	18.0	36.0	36.0	37.0	37.0
MANIFOLD VACUUM, IN HG	4.8	4.8	10.5	10.5	14.5	14.5
THROTTLE ANGLE, DEG	16.0	16.0	10.0	10.0	7.0	7.0
INTAKE MAN. TEMP., F	209	209	206	206	210	210
CONCENTRATIONS, DRY BASIS						
CO, %	.1511	.0024	.0073	.0024	.0868	.0145
CO2, %	13.40	13.53	12.75	13.14	12.88	13.53
O2, %	1.30	1.25	2.65	2.13	2.63	1.63
HC, PPMC	1138	188	4520	851	7924	1707
NOX, PPM	963	938	725	775	900	938
AIR/FUEL RATIO	15.58	15.73	16.30	16.32	15.83	15.82
EMISSION RATES, G/HR						
CO	157.8	2.6	5.8	1.9	51.2	8.5
HC	59.7	9.9	179.5	33.3	234.6	50.5
NOX+	152.2	148.9	85.4	89.9	83.2	86.5
OIL TEMPERATURE, F	227	226	212	212	206	206
OIL PRESSURE, PSI	35	35	50	50	52	52
COOLANT TEMPERATURE, F	167	167	174	174	175	175
EXHAUST PRESSURE, IN. H2O	17.0	6.0	10.0	6.0	6.0	3.0
EXHAUST TEMPERATURE, F	1151	992	958	864	901	896

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	28.1	28.2	29.1	29.2	30.1	30.2
TEST DATE	4/18/77	4/18/77	4/18/77	4/18/77	4/18/77	4/18/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.0	740.0	740.0	740.0	740.0	740.0
HUMIDITY, GRAINS/LB	68	68	68	68	68	68
TEMPERATURE, F	73	73	74	74	76	76
ENGINE SPEED, RPM	1700	1700	1700	1700	2000	2000
TORQUE, FT-LB	17.9	17.9	2.0	2.0	179.0	179.0
POWER, BHP*	5.8	5.8	.6	.6	68.3	68.3
FUEL RATE, LB/HR	6.4	6.4	5.7	5.6	32.1	31.6
IGNITION TIMING, DEG BTDC	38.0	38.0	38.0	38.0	17.0	17.0
MANIFOLD VACUUM, IN HG	19.5	19.5	21.0	21.0	.6	.6
THROTTLE ANGLE, DEG	3.0	3.0	2.0	2.0	67.0	67.0
INTAKE MAN. TEMP., F	154	154	156	156	102	102
CONCENTRATIONS, DRY BASIS						
CO, %	.6454	.0561	1.0340	.0700	3.8170	3.5939
CO2, %	12.50	14.80	10.50	13.91	11.90	12.38
O2, %	2.40	.93	5.10	.95	.70	.10
HC, PPMC	9620	2015	26734	4284	1145	551
NOX, PPM	670	700	225	320	1900	1375
AIR/FUEL RATIO	15.19	15.22	15.07	15.00	13.54	13.33
EMISSION RATES, G/HR						
CO	260.5	22.3	372.8	24.0	6829.2	6206.5
HC	195.0	40.2	484.1	73.8	102.9	47.8
NOX+	43.1	44.3	12.9	17.5	541.6	378.3
OIL TEMPERATURE, F	206	206	208	208	227	227
OIL PRESSURE, PSI	40	40	42	42	42	42
COOLANT TEMPERATURE, F	172	172	173	173	182	182
EXHAUST PRESSURE, IN. H2O	4.0	.0	4.0	.0	49.0	23.0
EXHAUST TEMPERATURE, F	750	817	642	1048	1256	1226

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	31.1	31.2	32.1	32.2	33.1	33.2
TEST DATE	4/18/77	4/18/77	4/18/77	4/18/77	4/22/77	4/22/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.0	740.0	740.0	740.0	745.6	745.6
HUMIDITY, GRAINS/LB	68	68	68	68	53	53
TEMPERATURE, F	76	76	76	76	74	74
ENGINE SPEED, RPM	2000	2000	2000	2000	2000	2000
TORQUE, FT-LB	161.0	161.0	134.0	134.0	107.0	107.0
POWER, BHP*	61.5	61.5	51.2	51.2	40.3	40.3
FUEL RATE, LB/HR	26.1	26.7	22.9	22.7	18.9	18.6
IGNITION TIMING, DEG BTDC	16.0	16.0	15.0	15.0	15.0	15.0
MANIFOLD VACUUM, IN HG	2.5	2.5	3.5	3.5	5.0	5.0
THROTTLE ANGLE, DEG	29.0	29.0	24.0	24.0	19.0	19.0
INTAKE MAN. TEMP., F	137	137	175	175	201	201
CONCENTRATIONS, DRY BASIS						
CO, %	2.1086	2.0830	1.0515	.6125	.1890	.0286
CO2, %	13.40	13.40	13.80	14.35	13.94	14.08
O2, %	.10	.02	.45	.10	.88	.75
HC, PPMC	1668	1466	1549	357	1172	194
NOX, PPM	1625	1590	1525	680	800	825
AIR/FUEL RATIO	13.86	13.84	14.54	14.59	15.24	15.33
EMISSION RATES, G/HR						
CO	3121.4	3143.5	1429.2	827.9	222.5	33.3
HC	124.0	111.1	105.8	24.2	69.3	11.4
NOX+	383.2	382.3	330.2	146.4	140.3	142.9
OIL TEMPERATURE, F	238	238	237	237	208	208
OIL PRESSURE, PSI	39	39	40	40	50	50
COOLANT TEMPERATURE, F	186	186	185	185	177	177
EXHAUST PRESSURE, IN. H2O	35.0	17.0	30.0	14.0	20.0	13.0
EXHAUST TEMPERATURE, F	1257	1090	1250	1120	1194	1037

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	34.1	34.2	35.1	35.2	36.1	36.2
TEST DATE	4/22/77	4/22/77	4/28/77	4/28/77	4/28/77	4/28/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	754.6	754.6	742.0	742.0	742.0	742.0
HUMIDITY, GRAINS/LB	52	52	71	71	71	71
TEMPERATURE, F	74	74	75	75	74	74
ENGINE SPEED, RPM	2000	2000	2000	2000	2000	2000
TORQUE, FT-LB	71.0	71.0	44.0	44.0	17.0	17.0
POWER, BHP*	26.4	26.4	16.8	16.8	6.5	6.5
FUEL RATE, LB/HR	14.1	14.0	11.9	11.7	8.5	8.6
IGNITION TIMING, DEG BTDC	34.0	34.0	37.0	37.0	37.0	37.0
MANIFOLD VACUUM, IN HG	8.5	8.5	13.0	13.0	17.5	17.5
THROTTLE ANGLE, DEG	12.0	12.0	8.0	8.0	6.0	6.0
INTAKE MAN. TEMP., F	224	224	227	227	205	205
CONCENTRATIONS, DRY BASIS						
CO, %	.0677	.0097	.0988	.0169	.1084	.0193
CO2, %	12.88	13.14	12.75	13.53	11.44	13.14
O2, %	2.38	2.18	2.63	1.55	4.75	2.25
HC, PPMC	1075	198	10176	1593	21231	3289
NOX, PPM	750	725	463	513	500	688
AIR/FUEL RATIO	16.47	16.44	15.56	15.76	15.89	16.10
EMISSION RATES, G/HR						
CO	64.5	9.2	75.8	12.7	61.4	10.9
HC	51.5	9.4	392.0	60.3	604.0	93.8
NOX+	106.2	101.5	57.3	62.4	45.7	63.1
OIL TEMPERATURE, F	222	222	217	217	215	215
OIL PRESSURE, PSI	50	50	51	51	51	51
COOLANT TEMPERATURE, F	180	180	178	178	174	174
EXHAUST PRESSURE, IN. H2O	12.0	9.0	10.0	7.0	9.0	4.0
EXHAUST TEMPERATURE, F	1055	917	992	974	842	1034

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	37.1	37.2	38.1	38.2	39.1	39.2
TEST DATE	4/18/77	4/18/77	4/18/77	4/18/77	4/18/77	4/18/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.0	740.0	740.0	740.0	740.0	740.0
HUMIDITY, GRAINS/LB	73	73	73	73	73	73
TEMPERATURE, F	73	73	74	74	75	75
ENGINE SPEED, RPM	2000	2000	2500	2500	2500	2500
TORQUE, FT-LB	3.0	3.0	181.0	181.0	162.9	162.9
POWER, BHP*	1.1	1.1	86.3	86.3	77.8	77.8
FUEL RATE, LB/HR	6.4	6.5	39.5	37.7	35.5	35.4
IGNITION TIMING, DEG BTDC	37.0	37.0	16.0	16.0	16.0	16.0
MANIFOLD VACUUM, IN HG	21.0	21.0	.5	.5	2.5	2.5
THROTTLE ANGLE, DEG	3.5	3.5	67.0	67.0	34.0	34.0
INTAKE MAN. TEMP., F	162	161	95	95	116	116
CONCENTRATIONS, DRY BASIS						
CO, %	.3994	.0024	3.4660	3.2647	3.3437	3.3040
CO2, %	11.11	13.27	12.13	12.50	12.50	12.62
O2, %	4.63	1.63	.38	.13	.03	.01
HC, PPMC	23157	3009	859	448	1177	1236
NOX, PPM	470	555	1900	1550	1350	1300
AIR/FUEL RATIO	15.44	15.68	13.51	13.49	13.33	13.34
EMISSION RATES, G/HR						
CO	165.7	1.0	7606.8	6822.0	6501.3	6396.4
HC	482.5	63.6	94.7	47.0	114.9	120.1
NOX+	31.8	38.0	679.1	527.4	427.5	409.8
OIL TEMPERATURE, F	200	200	212	214	237	236
OIL PRESSURE, PSI	52	52	50	50	47	47
COOLANT TEMPERATURE, F	172	172	181	182	191	190
EXHAUST PRESSURE, IN. H2O	6.0	1.0	68.0	39.0	29.0	29.0
EXHAUST TEMPERATURE, F	724	967	1337	1268	1318	1181

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	40.1	40.2	41.1	41.2	42.1	42.2
TEST DATE	4/18/77	4/18/77	4/18/77	4/18/77	4/28/77	4/28/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.0	740.0	740.0	740.0	742.0	742.0
HUMIDITY, GRAINS/LB	73	73	73	73	71	71
TEMPERATURE, F	76	76	75	75	74	74
ENGINE SPEED, RPM	2500	2500	2500	2500	2500	2500
TORQUE, FT-LB	135.8	135.8	108.6	108.6	73.0	73.0
POWER, BHP*	64.9	64.9	51.8	51.8	34.7	34.7
FUEL RATE, LB/HR	29.3	29.0	24.8	24.9	17.6	17.2
IGNITION TIMING, DEG BTDC	15.0	15.0	14.8	14.8	36.0	36.0
MANIFOLD VACUUM, IN HG	3.5	3.5	4.8	4.8	9.5	9.5
THROTTLE ANGLE, DEG	27.0	27.0	24.0	24.0	14.0	14.0
INTAKE MAN. TEMP., F	172	172	215	215	224	224
CONCENTRATIONS, DRY BASIS						
CO, %	1.5190	1.4750	.5754	.3756	.0748	.0193
CO2, %	13.53	13.67	13.94	14.35	13.40	13.80
O2, %	.03	.01	.33	.01	1.75	1.30
HC, PPMC	1234	891	974	236	3412	656
NOX, PPM	1350	1350	788	275	1088	1138
AIR/FUEL RATIO	14.09	14.13	14.70	14.64	15.69	15.69
EMISSION RATES, G/HR						
CO	2563.0	2469.6	857.7	557.4	84.6	21.3
HC	104.6	74.9	72.9	17.6	193.7	36.3
NOX+	370.9	368.1	191.3	66.5	198.5	202.6
OIL TEMPERATURE, F	245	243	231	232	225	225
OIL PRESSURE, PSI	49	49	51	51	50	50
COOLANT TEMPERATURE, F	193	193	182	182	177	177
EXHAUST PRESSURE, IN. H2O	43.0	23.0	33.0	18.0	16.0	11.0
EXHAUST TEMPERATURE, F	1325	1167	1305	1166	1110	1000

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	43.1	43.2	44.1	44.2	45.1	45.2
TEST DATE	4/28/77	4/28/77	4/18/77	4/18/77	4/18/77	4/18/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	742.0	742.0	740.0	740.0	740.0	740.0
HUMIDITY, GRAINS/LB	71	71	73	73	73	73
TEMPERATURE, F	74	74	75	75	73	73
ENGINE SPEED, RPM	2500	2500	2500	2500	2500	2500
TORQUE, FT-LB	45.0	45.0	18.1	18.1	2.0	2.0
POWER, BHP*	21.4	21.4	8.6	8.6	1.0	1.0
FUEL RATE, LB/HR	14.6	14.6	12.0	12.2	8.7	8.8
IGNITION TIMING, DEG BTDC	37.0	37.0	36.0	36.0	36.0	36.0
MANIFOLD VACUUM, IN HG	12.0	12.0	15.0	15.0	18.8	18.8
THROTTLE ANGLE, DEG	11.0	11.0	8.5	8.5	5.0	5.0
INTAKE MAN. TEMP., F	244	244	170	171	200	200
CONCENTRATIONS, DRY BASIS						
CO, %	.1108	.0216	.1580	.0024	.1700	.0024
CO2, %	12.75	13.80	12.02	13.14	11.78	13.14
O2, %	2.75	1.40	3.63	2.05	4.25	2.25
HC, PPMC	9612	1597	10675	1701	15418	2835
NOX, PPM	513	600	175	210	195	245
AIR/FUEL RATIO	15.70	15.64	16.24	16.14	16.13	16.15
EMISSION RATES, G/HR						
CO	105.0	20.2	127.2	2.0	99.4	1.4
HC	457.4	75.0	431.7	69.0	452.8	83.4
NOX+	78.5	90.6	22.9	27.6	18.6	23.4
OIL TEMPERATURE, F	230	230	184	185	211	211
OIL PRESSURE, PSI	50	50	55	55	53	53
COOLANT TEMPERATURE, F	180	180	171	170	174	174
EXHAUST PRESSURE, IN. H2O	15.0	10.0	12.0	6.0	8.0	3.0
EXHAUST TEMPERATURE, F	1070	1044	1023	991	952	996

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	46.1	46.2	47.1	47.2	48.1	48.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	4/22/77	4/22/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	741.5	741.5	741.5	741.5	754.6	754.6
HUMIDITY, GRAINS/LB	68	68	68	68	52	52
TEMPERATURE, F	76	76	76	76	74	74
ENGINE SPEED, RPM	3000	3000	3000	3000	3000	3000
TORQUE, FT-LB	172.0	172.0	155.0	155.0	129.0	129.0
POWER, BHP*	98.3	98.3	88.6	88.6	72.1	72.1
FUEL RATE, LB/HR	46.9	46.2	43.5	42.3	34.7	32.9
IGNITION TIMING, DEG BTDC	.0	15.0	13.5	13.5	14.0	14.0
MANIFOLD VACUUM, IN HG	1.0	1.0	2.5	2.5	3.5	3.5
THROTTLE ANGLE, DEG	67.0	67.0	37.0	37.0	30.0	30.0
INTAKE MAN. TEMP., F	146	146	158	158	219	219
CONCENTRATIONS, DRY BASIS						
CO, %	3.3437	3.2260	2.9280	2.9280	1.8649	1.2557
CO2, %	12.75	12.88	12.88	13.01	13.67	13.80
O2, %	.35	.17	.17	.10	.25	.10
HC, PPMC	840	484	1023	794	1094	689
NOX, PPM	1870	1750	1500	1475	1113	1213
AIR/FUEL RATIO	13.59	13.56	13.62	13.60	14.10	14.30
EMISSION RATES, G/HR						
CO	8719.6	8257.1	7104.8	6898.6	3722.4	2409.1
HC	110.0	62.2	124.7	94.0	109.7	66.4
NOX+	776.3	713.0	579.4	553.2	329.7	345.3
OIL TEMPERATURE, F	231	231	230	230	244	244
OIL PRESSURE, PSI	50	50	50	50	49	49
COOLANT TEMPERATURE, F	186	186	176	176	181	181
EXHAUST PRESSURE, IN. H2O	91.0	53.0	43.0	27.0	46.0	33.0
EXHAUST TEMPERATURE, F	1427	1317	1407	1251	1385	1224

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	49.1	49.2	50.1	50.2	51.1	51.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	741.5	741.5	741.5	741.5	741.5	741.5
HUMIDITY, GRAINS/LB	68	68	68	68	68	68
TEMPERATURE, F	79	79	77	77	77	77
ENGINE SPEED, RPM	3000	3000	3000	3000	3000	3000
TORQUE, FT-LB	103.0	103.0	69.0	69.0	43.0	43.0
POWER, BHP*	59.0	59.0	39.5	39.5	24.6	24.6
FUEL RATE, LB/HR	29.8	29.6	21.1	21.8	16.7	17.3
IGNITION TIMING, DEG BTDC	12.5	12.5	32.0	32.0	34.0	34.0
MANIFOLD VACUUM, IN HG	4.5	4.5	9.0	9.0	12.0	12.0
THROTTLE ANGLE, DEG	27.0	27.0	15.5	15.5	12.0	12.0
INTAKE MAN. TEMP., F	235	235	255	255	257	257
CONCENTRATIONS, DRY BASIS						
CO, %	.3756	.0725	.1084	.0169	.1277	.0169
CO2, %	14.21	14.49	13.80	13.94	13.21	13.80
O2, %	.55	.30	1.30	1.15	1.85	1.30
HC, PPMC	631	103	765	148	4259	685
NOX, PPM	960	750	1400	1400	460	500
AIR/FUEL RATIO	14.98	15.00	15.64	15.65	15.63	15.67
EMISSION RATES, G/HR						
CO	684.0	131.1	146.3	23.5	136.9	18.8
HC	57.7	9.4	51.8	10.4	229.4	38.2
NOX+	278.3	215.9	300.8	310.0	78.5	88.5
OIL TEMPERATURE, F	247	247	258	258	254	254
OIL PRESSURE, PSI	49	49	48	48	48	48
COOLANT TEMPERATURE, F	182	182	182	182	179	179
EXHAUST PRESSURE, IN. H2O	49.0	24.0	28.0	12.0	19.0	9.0
EXHAUST TEMPERATURE, F	1414	1254	1221	1050	1166	1022

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	52.1	52.2	53.1	53.2	54.1	54.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	741.5	741.5	741.5	741.5	741.5	741.5
HUMIDITY, GRAINS/LB	68	68	68	68	68	68
TEMPERATURE, F	77	77	77	77	82	82
ENGINE SPEED, RPM	3000	3000	3000	3000	3300	3300
TORQUE, FT-LB	17.0	17.0	1.0	1.0	157.0	157.0
POWER, BHP*	9.7	9.7	.6	.6	99.3	99.3
FUEL RATE, LB/HR	14.5	14.1	12.0	11.6	49.7	50.0
IGNITION TIMING, DEG BTDC	33.0	33.0	35.0	35.0	13.0	13.0
MANIFOLD VACUUM, IN HG	14.5	14.5	17.0	17.0	1.5	1.5
THROTTLE ANGLE, DEG	9.0	9.0	8.0	8.0	67.0	67.0
INTAKE MAN. TEMP., F	256	256	214	214	176	176
CONCENTRATIONS, DRY BASIS						
CO, %	.1721	.0216	.2335	.0263	3.2260	3.2260
CO2, %	12.50	13.67	11.55	13.27	12.50	12.50
O2, %	3.25	1.50	4.50	2.07	.20	.11
HC, PPMC	11287	1709	18470	2498	803	557
NOX, PPM	185	240	105	140	1650	1650
AIR/FUEL RATIO	15.84	15.69	15.94	16.03	13.52	13.48
EMISSION RATES, G/HR						
CO	163.1	19.6	186.0	20.1	8904.1	8928.6
HC	537.3	77.8	739.0	95.9	111.4	77.4
NOX+	27.9	34.6	13.3	17.0	724.9	726.9
OIL TEMPERATURE, F	251	251	226	226	254	254
OIL PRESSURE, PSI	48	48	50	50	47	47
COOLANT TEMPERATURE, F	178	178	175	175	186	186
EXHAUST PRESSURE, IN. H2O	18.0	8.0	14.0	7.0	100.0	63.0
EXHAUST TEMPERATURE, F	1121	1077	1057	1131	1477	1325

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	55.1	55.2	56.1	56.2	57.1	57.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	741.5	741.5	740.2	740.2	740.2	740.2
HUMIDITY, GRAINS/LB	68	68	74	74	74	74
TEMPERATURE, F	82	82	85	85	84	84
ENGINE SPEED, RPM	3300	3300	3300	3300	3300	3300
TORQUE, FT-LB	141.0	141.0	118.0	118.0	94.0	94.0
POWER, BHP*	89.1	89.1	75.0	75.0	59.7	59.7
FUEL RATE, LB/HR	45.7	45.5	41.0	39.9	32.6	33.7
IGNITION TIMING, DEG BTDC	12.0	12.0	11.5	11.5	11.0	11.0
MANIFOLD VACUUM, IN HG	3.0	3.0	3.0	3.0	4.5	4.5
THROTTLE ANGLE, DEG	38.0	38.0	34.5	34.5	28.5	28.5
INTAKE MAN. TEMP., F	194	194	232	232	262	264
CONCENTRATIONS, DRY BASIS						
CO, %	2.9280	2.9641	2.9280	2.9280	.4230	.1036
CO2, %	12.75	12.75	12.75	12.75	14.01	14.35
O2, %	.15	.10	.12	.05	.45	.25
HC, PPMC	896	678	1057	861	344	75
NOX, PPM	1550	1460	800	760	995	700
AIR/FUEL RATIO	13.61	13.58	13.55	13.52	14.92	14.95
EMISSION RATES, G/HR						
CO	7471.6	7510.9	6671.0	6484.6	841.7	212.9
HC	114.8	86.3	120.9	95.8	34.3	7.7
NOX+	629.6	588.9	298.9	276.0	324.6	235.9
OIL TEMPERATURE, F	277	277	272	272	274	275
OIL PRESSURE, PSI	46	46	47	47	46	46
COOLANT TEMPERATURE, F	192	192	192	192	194	194
EXHAUST PRESSURE, IN. H2O	90.0	52.0	70.0	38.0	61.0	35.0
EXHAUST TEMPERATURE, F	1461	1294	1422	1247	1477	1302

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	58.1	58.2	59.1	59.2	60.1	60.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.3	740.3	740.3	740.3	740.3	740.3
HUMIDITY, GRAINS/LB	69	69	69	69	69	69
TEMPERATURE, F	76	76	77	77	77	77
ENGINE SPEED, RPM	3300	3300	3300	3300	3300	3300
TORQUE, FT-LB	63.0	63.0	39.0	39.0	16.0	16.0
POWER, BHP*	39.7	39.7	24.6	24.6	10.1	10.1
FUEL RATE, LB/HR	22.6	23.0	19.4	19.8	15.7	14.8
IGNITION TIMING, DEG BTDC	36.0	36.0	33.0	33.0	33.0	33.0
MANIFOLD VACUUM, IN HG	10.0	10.0	12.0	12.0	15.0	15.0
THROTTLE ANGLE, DEG	17.0	17.0	12.0	12.0	10.0	10.0
INTAKE MAN. TEMP., F	186	186	246	245	250	250
CONCENTRATIONS, DRY BASIS						
CO, %	.1253	.0024	.1420	.0024	.1769	.0024
CO2, %	13.53	13.80	13.27	13.80	12.50	13.67
O2, %	1.38	1.13	1.75	1.23	3.00	1.38
HC, PPMC	1253	137	4545	856	13544	2165
NOX, PPM	900	950	550	625	220	215
AIR/FUEL RATIO	15.63	15.63	15.52	15.61	15.40	15.56
EMISSION RATES, G/HR						
CO	181.7	3.6	175.3	3.1	177.4	2.3
HC	91.2	10.1	281.8	54.3	682.1	102.5
NOX+	209.2	223.6	108.9	126.6	35.4	32.5
OIL TEMPERATURE, F	204	205	241	241	253	251
OIL PRESSURE, PSI	52	52	50	50	48	48
COOLANT TEMPERATURE, F	170	170	174	174	177	177
EXHAUST PRESSURE, IN. H2O	28.0	15.0	23.0	12.0	18.0	9.0
EXHAUST TEMPERATURE, F	1227	1062	1212	1085	1154	1136

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	61.1	61.2	62.1	62.2	63.1	63.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	5/ 4/77	5/ 4/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.3	740.3	740.3	740.3	737.5	737.5
HUMIDITY, GRAINS/LB	69	69	69	69	63	63
TEMPERATURE, F	77	77	82	82	76	76
ENGINE SPEED, RPM	3300	3300	3600	3600	3600	3600
TORQUE, FT-LB	1.0	1.0	148.0	148.0	133.0	133.0
POWER, BHP*	.6	.6	102.3	102.3	91.6	91.6
FUEL RATE, LB/HR	13.5	13.7	52.7	53.1	43.6	43.1
IGNITION TIMING, DEG BTDC	34.0	34.0	13.0	13.0	12.5	12.5
MANIFOLD VACUUM, IN HG	17.0	17.0	1.5	1.5	3.0	3.0
THROTTLE ANGLE, DEG	8.0	8.0	67.0	67.0	36.0	36.0
INTAKE MAN. TEMP., F	252	252	143	143	182	182
CONCENTRATIONS, DRY BASIS						
CO, %	.2331	.0049	3.0373	3.1500	2.9641	3.0373
CO2, %	11.90	13.80	12.75	12.75	12.50	12.50
O2, %	3.75	1.25	.18	.13	.10	.05
HC, PPMC	19652	3308	862	632	1060	929
NOX, PPM	135	165	1800	1800	1050	1020
AIR/FUEL RATIO	15.25	15.34	13.59	13.54	13.51	13.46
EMISSION RATES, G/HR						
CO	200.5	4.2	8909.0	9277.9	7181.8	7245.7
HC	848.9	142.7	127.0	93.5	129.0	111.3
NOX+	18.6	22.7	846.4	849.9	396.7	379.5
OIL TEMPERATURE, F	251	251	246	247	244	244
OIL PRESSURE, PSI	48	48	50	50	50	50
COOLANT TEMPERATURE, F	175	176	182	184	185	185
EXHAUST PRESSURE, IN. H2O	15.0	6.0	100.0	72.0	70.0	51.0
EXHAUST TEMPERATURE, F	1115	11544	1522	1364	1415	1262

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	64.1	64.2	65.1	65.2	66.1	66.2
TEST DATE	4/22/77	4/22/77	4/22/77	4/22/77	4/22/77	4/22/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	754.6	754.6	754.6	754.6	754.6	754.6
HUMIDITY, GRAINS/LB	52	52	52	52	52	52
TEMPERATURE, F	77	77	77	77	76	76
ENGINE SPEED, RPM	3600	3600	3600	3600	3600	3600
TORQUE, FT-LB	111.0	111.0	88.8	88.8	59.2	59.2
POWER, BHP*	74.6	74.6	59.7	59.7	39.8	39.8
FUEL RATE, LB/HR	40.0	40.2	33.0	32.6	24.0	24.2
IGNITION TIMING, DEG BTDC	12.0	12.0	12.0	12.0	30.0	30.0
MANIFOLD VACUUM, IN HG	4.0	4.0	5.0	5.0	10.0	10.0
THROTTLE ANGLE, DEG	33.0	33.0	31.0	31.0	18.0	18.0
INTAKE MAN. TEMP., F	250	250	257	251	276	276
CONCENTRATIONS, DRY BASIS						
CO, %	2.4451	2.5940	.1060	.0193	.1349	.0240
CO2, %	13.01	13.01	13.67	13.67	13.40	13.80
O2, %	.23	.13	1.25	1.25	1.50	1.20
HC, PPMC	976	776	91	28	1593	342
NOX, PPM	875	863	1013	1050	1475	1513
AIR/FUEL RATIO	13.83	13.73	15.68	15.73	15.70	15.67
EMISSION RATES, G/HR						
CO	5537.7	5856.6	224.2	40.6	208.7	37.2
HC	111.0	88.0	9.7	3.0	123.7	26.7
NOX+	294.1	289.1	318.0	327.4	338.6	348.3
OIL TEMPERATURE, F	266	266	276	276	273	273
OIL PRESSURE, PSI	46	46	46	46	47	47
COOLANT TEMPERATURE, F	183	184	191	192	188	187
EXHAUST PRESSURE, IN. H2O	63.0	44.0	55.0	39.0	30.0	20.0
EXHAUST TEMPERATURE, F	1445	1281	1477	1292	1287	1151

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	67.1	67.2	68.1	68.2	69.1	69.2
TEST DATE	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77	4/19/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	740.3	740.3	740.3	740.3	740.3	740.3
HUMIDITY, GRAINS/LB	69	69	69	69	69	69
TEMPERATURE, F	81	81	79	79	74	74
ENGINE SPEED, RPM	3600	3600	3600	3600	3600	3600
TORQUE, FT-LB	37.0	37.0	14.8	14.8	4.0	4.0
POWER, BHP*	25.5	25.5	10.2	10.2	2.7	2.7
FUEL RATE, LB/HR	21.5	21.3	17.0	16.7	16.1	15.7
IGNITION TIMING, DEG BTDC	33.0	33.0	36.0	36.0	36.0	36.0
MANIFOLD VACUUM, IN HG	11.0	11.0	13.5	13.5	14.8	14.8
THROTTLE ANGLE, DEG	16.0	16.0	11.5	11.5	10.0	10.0
INTAKE MAN. TEMP., F	251	251	244	244	181	183
CONCENTRATIONS, DRY BASIS						
CO, %	.1443	.0024	.2335	.0049	.2406	.0049
CO2, %	12.88	13.67	11.90	13.80	12.50	14.21
O2, %	2.38	1.38	4.00	1.33	3.75	1.50
HC, PPMC	8493	1937	23863	4107	18348	3091
NOX, PPM	275	265	155	170	120	160
AIR/FUEL RATIO	15.53	15.59	14.98	15.31	15.37	15.51
EMISSION RATES, G/HR						
CO	198.9	3.3	247.3	5.1	246.9	4.8
HC	588.1	132.6	1269.3	216.5	945.7	153.8
NOX+	60.8	57.9	26.3	28.6	19.7	25.4
OIL TEMPERATURE, F	274	275	265	265	216	216
OIL PRESSURE, PSI	46	46	47	47	50	50
COOLANT TEMPERATURE, F	179	179	178	176	176	176
EXHAUST PRESSURE, IN. H2O	32.0	16.0	21.0	11.0	20.0	9.0
EXHAUST TEMPERATURE, F	1226	1176	1131	1244	1154	1194

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	70.1	70.2	71.1	71.2	72.1	72.2
TEST DATE	4/20/77	4/20/77	4/20/77	4/20/77	4/20/77	4/20/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	738.5	738.5	738.5	738.5	738.5	738.5
HUMIDITY, GRAINS/LB	68	68	68	68	68	68
TEMPERATURE, F	71	71	71	71	71	71
ENGINE SPEED, RPM	750	750	750	750	750	750
TORQUE, FT-LB	.0	.0	15.0	15.0	30.0	30.0
POWER, BHP*	.0	.0	2.1	2.1	4.3	4.3
FUEL RATE, LB/HR	3.2	3.2	3.2	3.2	4.1	3.9
IGNITION TIMING, DEG BTDC	12.0	12.0	10.0	10.0	10.0	10.0
MANIFOLD VACUUM, IN HG	20.0	20.0	17.5	17.5	16.0	16.0
THROTTLE ANGLE, DEG	.0	.0	.0	.0	.0	.0
INTAKE MAN. TEMP., F	137	137	134	134	132	134
CONCENTRATIONS, DRY BASIS						
CO, %	.9092	.0332	1.0450	.1036	.9692	.0607
CO2, %	11.90	13.40	12.50	13.80	12.38	13.80
O2, %	2.95	1.40	1.95	.90	1.75	.80
HC, PPMC	7892	796	4538	799	2265	354
NOX, PPM	41	59	78	81	260	190
AIR/FUEL RATIO	15.64	15.73	15.20	15.31	15.36	15.32
EMISSION RATES, G/HR						
CO	185.6	6.9	209.8	20.8	251.6	14.7
HC	80.9	8.3	45.8	8.1	29.5	4.3
NOX+	1.3	1.9	2.5	2.6	10.8	7.3
OIL TEMPERATURE, F	181	181	185	185	185	187
OIL PRESSURE, PSI	40	40	40	40	40	38
COOLANT TEMPERATURE, F	167	161	171	171	170	171
EXHAUST PRESSURE, IN. H2O	2.0	1.0	2.0	1.0	2.0	1.0
EXHAUST TEMPERATURE, F	585	684	555	642	582	644

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	73.1	73.2	74.1	74.2	75.1	75.2
TEST DATE	4/29/77	4/29/77	5/ 4/77	5/ 4/77	4/28/77	4/28/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	741.5	741.5	737.5	737.5	742.0	742.0
HUMIDITY, GRAINS/LB	69	69	63	63	61	61
TEMPERATURE, F	72	72	72	72	76	76
ENGINE SPEED, RPM	650	650	650	650	1000	1000
TORQUE, FT-LB	20.0	20.0	30.0	30.0	133.0	133.0
POWER, BHP*	2.5	2.5	3.7	3.7	25.3	25.3
FUEL RATE, LB/HR	3.6	3.6	3.2	3.2	11.5	11.5
IGNITION TIMING, DEG BTDC	12.0	12.0	10.5	10.5	12.0	12.0
MANIFOLD VACUUM, IN HG	18.5	18.5	16.4	16.4	3.0	3.0
THROTTLE ANGLE, DEG	.5	.5	.0	.0	12.0	12.0
INTAKE MAN. TEMP., F	166	166	146	146	161	161
CONCENTRATIONS, DRY BASIS						
CO, %	.7190	.0630	.8706	.7950	.2380	.0145
CO2, %	13.01	13.80	12.50	12.38	13.27	13.67
O2, %	1.50	1.00	2.10	2.40	1.50	1.25
HC, PPMC	2161	456	2550	2467	1364	160
NOX, PPM	160	140	160	170	1638	1613
AIR/FUEL RATIO	15.30	15.44	15.63	15.91	15.69	15.74
EMISSION RATES, G/HR						
CO	162.7	14.3	181.7	168.5	176.7	10.8
HC	24.6	5.2	26.7	26.2	50.9	6.0
NOX+	5.8	5.1	5.2	5.6	188.1	185.6
OIL TEMPERATURE, F	187	187	180	180	185	185
OIL PRESSURE, PSI	40	40	35	35	45	45
COOLANT TEMPERATURE, F	172	172	175	175	176	176
EXHAUST PRESSURE, IN. H2O	1.0	.0	2.0	1.0	10.0	4.0
EXHAUST TEMPERATURE, F	588	611	507	380	975	844

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	76.1	76.2	77.1	77.2	78.1	78.2
TEST DATE	4/28/77	4/28/77	4/20/77	4/20/77	4/20/77	4/20/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	742.0	742.0	738.5	738.5	738.5	738.5
HUMIDITY, GRAINS/LB	71	61	73	68	68	68
TEMPERATURE, F	76	76	74	74	72	72
ENGINE SPEED, RPM	1000	1000	1000	1000	1000	1000
TORQUE, FT-LB	106.0	106.0	70.0	70.0	44.0	44.0
POWER, BHP*	20.2	20.2	13.4	13.4	8.4	8.4
FUEL RATE, LB/HR	9.3	9.3	6.7	6.7	5.3	5.4
IGNITION TIMING, DEG BTDC	14.0	14.0	31.0	31.0	31.0	31.0
MANIFOLD VACUUM, IN HG	6.5	6.5	12.0	12.0	16.0	16.0
THROTTLE ANGLE, DEG	9.0	9.0	3.0	3.0	2.5	2.5
INTAKE MAN. TEMP., F	176	176	148	148	137	137
CONCENTRATIONS, DRY BASIS						
CO, %	.0538	.0097	.3937	.0145	1.5019	.0700
CO2, %	12.62	12.88	12.75	13.27	12.13	13.94
O2, %	2.63	2.50	2.00	1.60	2.20	.65
HC, PPMC	1157	96	1416	131	1927	400
NOX, PPM	1650	1250	2375	2175	950	800
AIR/FUEL RATIO	16.73	16.75	16.02	16.05	15.47	15.22
EMISSION RATES, G/HR						
CO	34.5	6.2	174.0	6.4	508.1	23.4
HC	37.3	3.1	31.4	2.9	32.7	6.7
NOX+	171.0	124.3	171.1	153.1	51.2	42.6
OIL TEMPERATURE, F	197	198	202	202	200	200
OIL PRESSURE, PSI	42	42	40	40	40	40
COOLANT TEMPERATURE, F	180	174	174	174	172	172
EXHAUST PRESSURE, IN. H2O	7.0	3.0	4.0	3.0	3.0	1.0
EXHAUST TEMPERATURE, F	910	796	756	707	670	729

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	79.1	79.2	80.1	80.2	81.1	81.2
TEST DATE	4/20/77	4/20/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	738.5	738.5	744.0	744.0	744.0	744.0
HUMIDITY, GRAINS/LB	68	68	58	58	58	58
TEMPERATURE, F	72	72	70	70	72	72
ENGINE SPEED, RPM	1000	1000	1300	1300	1300	1300
TORQUE, FT-LB	2.0	2.0	133.0	133.0	106.0	106.0
POWER, BHP*	.4	.4	32.6	32.6	26.0	26.0
FUEL RATE, LB/HR	3.5	3.6	15.0	14.9	11.9	11.8
IGNITION TIMING, DEG BTDC	12.0	12.0	16.0	16.5	16.0	16.0
MANIFOLD VACUUM, IN HG	19.5	19.5	2.5	2.5	5.5	5.5
THROTTLE ANGLE, DEG	1.0	1.0	16.5	16.5	9.5	9.5
INTAKE MAN. TEMP., F	142	142	144	144	164	164
CONCENTRATIONS, DRY BASIS						
CO, %	.9092	.0065	.7570	.0988	.0607	.0075
CO2, %	12.13	13.53	13.40	14.21	13.27	13.40
O2, %	2.55	1.40	1.05	.40	1.90	1.75
HC, PPMC	6779	819	1541	229	1107	153
NOX, PPM	55	38	1280	750	1050	1020
AIR/FUEL RATIO	15.47	15.73	15.07	15.04	16.09	16.11
EMISSION RATES, G/HR						
CO	202.3	1.5	699.5	90.6	47.6	5.8
HC	75.7	9.5	71.5	10.6	43.6	6.0
NOX+	2.0	1.4	180.5	104.9	125.7	121.0
OIL TEMPERATURE, F	196	196	185	185	202	202
OIL PRESSURE, PSI	45	45	51	51	49	49
COOLANT TEMPERATURE, F	171	171	174	174	180	180
EXHAUST PRESSURE, IN. H2O	2.0	1.0	14.0	8.0	11.0	6.0
EXHAUST TEMPERATURE, F	611	704	1030	964	1027	897

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	82.1	82.2	83.1	83.2	84.1	84.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	744.0	744.0	744.0	744.0	744.0	744.0
HUMIDITY, GRAINS/LB	58	58	58	58	58	58
TEMPERATURE, F	72	72	72	72	71	71
ENGINE SPEED, RPM	1300	1300	1300	1300	1300	1300
TORQUE, FT-LB	71.0	71.0	44.0	44.0	2.0	2.0
POWER, BHP*	17.4	17.4	10.8	10.8	.5	.5
FUEL RATE, LB/HR	8.6	8.6	7.0	7.0	4.1	4.3
IGNITION TIMING, DEG BTDC	37.0	37.0	38.0	38.0	16.5	16.5
MANIFOLD VACUUM, IN HG	11.5	11.5	15.2	15.2	20.5	20.5
THROTTLE ANGLE, DEG	5.0	5.0	2.5	2.5	1.5	1.5
INTAKE MAN. TEMP., F	161	161	142	142	141	141
CONCENTRATIONS, DRY BASIS						
CO, %	.0424	.0049	.2482	.0240	.9488	.0470
CO2, %	13.14	13.27	12.50	13.40	12.25	13.94
O2, %	2.00	1.70	2.70	1.65	2.45	.95
HC, PPMC	1361	170	7904	1364	8484	914
NOX, PPM	2850	2800	2025	2050	60	82
AIR/FUEL RATIO	16.22	16.15	15.86	15.92	15.18	15.36
EMISSION RATES, G/HR						
CO	24.4	2.8	113.6	10.9	246.7	12.6
HC	39.3	4.9	181.8	31.2	110.8	12.3
NOX+	249.8	244.4	141.5	142.5	2.4	3.3
OIL TEMPERATURE, F	207	207	207	207	201	201
OIL PRESSURE, PSI	47	47	49	49	51	51
COOLANT TEMPERATURE, F	177	177	172	172	172	172
EXHAUST PRESSURE, IN. H2O	6.0	4.0	5.0	2.0	2.0	1.0
EXHAUST TEMPERATURE, F	866	768	772	784	676	748

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	85.1	85.2	86.1	86.2	87.1	87.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	744.5	744.5	744.5	744.5	744.5	744.5
HUMIDITY, GRAINS/LB	57	57	57	57	57	57
TEMPERATURE, F	74	74	72	72	72	72
ENGINE SPEED, RPM	1700	1700	1700	1700	1700	1700
TORQUE, FT-LB	134.0	134.0	107.0	107.0	71.6	71.6
POWER, BHP*	43.0	43.0	34.3	34.3	23.0	23.0
FUEL RATE, LB/HR	19.2	19.2	15.9	16.1	11.5	11.5
IGNITION TIMING, DEG BTDC	19.0	19.0	18.0	18.0	36.0	36.0
MANIFOLD VACUUM, IN HG	2.0	2.0	4.0	4.0	8.5	8.5
THROTTLE ANGLE, DEG	25.0	25.0	15.0	15.0	10.0	10.0
INTAKE MAN. TEMP., F	182	182	201	201	196	196
CONCENTRATIONS, DRY BASIS						
CO, %	1.4704	.6454	.1488	.0024	.0073	.0024
CO2, %	13.14	14.35	13.94	14.21	12.75	13.27
O2, %	.80	.13	.93	.75	2.50	1.88
HC, PPMC	1487	299	1229	235	6216	1135
NOX, PPM	963	313	850	875	838	850
AIR/FUEL RATIO	14.56	14.59	15.29	15.33	15.98	16.09
EMISSION RATES, G/HR						
CO	1685.4	734.8	147.8	2.5	5.6	1.9
HC	85.6	17.1	61.3	11.9	237.4	43.3
NOX+	167.6	54.1	128.2	134.2	96.8	98.1
OIL TEMPERATURE, F	180	180	208	208	212	212
OIL PRESSURE, PSI	53	53	50	50	50	50
COOLANT TEMPERATURE, F	175	175	177	177	177	177
EXHAUST PRESSURE, IN. H2O	22.0	12.0	16.0	10.0	10.0	5.0
EXHAUST TEMPERATURE, F	1141	1086	1141	982	982	912

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	88.1	88.2	89.1	89.2	90.1	90.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	744.5	744.5	744.5	744.5	744.5	744.5
HUMIDITY, GRAINS/LB	57	57	57	57	57	57
TEMPERATURE, F	71	71	71	71	72	72
ENGINE SPEED, RPM	1700	1700	1700	1700	2000	2000
TORQUE, FT-LB	44.8	44.8	2.0	2.0	134.0	134.0
POWER, BHP*	14.3	14.3	.6	.6	50.5	50.5
FUEL RATE, LB/HR	9.2	9.3	5.6	5.5	23.2	22.4
IGNITION TIMING, DEG BTDC	36.0	36.0	38.0	38.0	16.0	16.0
MANIFOLD VACUUM, IN HG	13.5	13.5	20.0	20.0	2.5	2.5
THROTTLE ANGLE, DEG	6.0	6.0	3.0	3.0	26.0	26.0
INTAKE MAN. TEMP., F	181	181	162	162	193	193
CONCENTRATIONS, DRY BASIS						
CO, %	0073	.0024	.4400	.0049	1.2100	.9092
CO2, %	12.38	13.14	9.79	13.14	13.80	14.35
O2, %	3.13	2.00	6.13	2.05	.38	.05
HC, PPMC	9011	1418	32767	4536	1436	392
NOX, PPM	675	750	315	440	1125	675
AIR/FUEL RATIO	16.14	16.16	15.46	15.81	14.42	14.43
EMISSION RATES, G/HR						
CO	4.5	1.5	161.4	1.7	1653.3	1197.3
HC	279.0	43.7	604.3	81.2	98.5	25.9
NOX+	63.2	69.9	17.5	23.8	233.4	135.0
OIL TEMPERATURE, F	212	212	211	211	205	205
OIL PRESSURE, PSI	50	50	50	50	51	51
COOLANT TEMPERATURE, F	174	174	172	172	175	175
EXHAUST PRESSURE, IN. H2O	8.0	4.0	2.0	1.0	27.0	16.0
EXHAUST TEMPERATURE, F	910	895	682	1066	1222	1093

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	91.1	91.2	92.1	92.2	93.1	93.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	744.5	744.5	744.5	744.5	744.5	744.5
HUMIDITY, GRAINS/LB	57	57	57	57	57	57
TEMPERATURE, F	74	74	72	72	72	72
ENGINE SPEED, RPM	2000	2000	2000	2000	2000	2000
TORQUE, FT-LB	107.0	107.0	71.0	71.0	44.0	44.0
POWER, BHP*	40.4	40.4	26.8	26.8	16.6	16.6
FUEL RATE, LB/HR	19.1	18.3	13.6	13.7	11.8	11.8
IGNITION TIMING, DEG BTDC	14.0	14.0	36.0	36.0	36.0	36.0
MANIFOLD VACUUM, IN HG	4.0	4.0	8.0	8.0	11.0	11.0
THROTTLE ANGLE, DEG	18.0	18.0	11.0	11.0	8.0	8.0
INTAKE MAN. TEMP., F	214	214	205	205	197	197
CONCENTRATIONS, DRY BASIS						
CO, %	.2431	.0049	.0073	.0024	.0097	.0024
CO2, %	14.08	14.49	13.14	13.27	12.13	13.14
O2, %	.70	.49	2.30	2.00	3.75	2.38
HC, PPMC	1260	218	2382	568	10957	1985
NOX, PPM	838	825	788	775	450	500
AIR/FUEL RATIO	15.08	15.15	16.26	16.25	16.38	16.36
EMISSION RATES, G/HR						
CO	285.8	5.5	6.6	2.2	7.8	1.9
HC	74.4	12.4	108.4	26.0	440.0	78.8
NOX+	149.6	141.8	108.4	107.2	54.6	60.0
OIL TEMPERATURE, F	217	217	220	220	221	221
OIL PRESSURE, PSI	50	50	50	50	50	50
COOLANT TEMPERATURE, F	178	178	174	174	172	172
EXHAUST PRESSURE, IN. H2O	20.0	12.0	13.0	9.0	12.0	6.0
EXHAUST TEMPERATURE, F	1197	1044	1054	927	987	977

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	94.1	94.2	95.1	95.2	96.1	96.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	744.5	744.5	744.5	744.0	746.2	746.2
HUMIDITY, GRAINS/LB	57	57	57	57	58	58
TEMPERATURE, F	72	72	72	72	74	74
ENGINE SPEED, RPM	2000	2000	2500	2500	2500	2500
TORQUE, FT-LB	2.0	2.0	135.8	135.8	108.6	108.6
POWER, BHP*	.8	.8	64.0	64.1	51.2	51.2
FUEL RATE, LB/HR	6.3	6.4	29.3	28.9	24.3	24.3
IGNITION TIMING, DEG BTDC	37.0	37.0	15.0	15.0	15.0	15.0
MANIFOLD VACUUM, IN HG	20.0	20.0	3.0	3.0	4.5	4.5
THROTTLE ANGLE, DEG	3.0	3.0	29.0	29.0	22.0	22.0
INTAKE MAN. TEMP., F	182	182	185	185	220	220
CONCENTRATIONS, DRY BASIS						
CO, %	.2322	.0024	1.3837	1.4202	.2335	.0049
CO2, %	10.40	13.01	13.67	13.80	13.94	14.08
O2 %	6.38	2.55	.23	.05	.75	.63
HC, PPMC	31568	4078	1183	920	772	126
NOX, PPM	488	613	1225	1225	1100	1100
AIR/FUEL RATIO	15.87	16.25	14.28	14.18	15.18	15.27
EMISSION RATES, G/HR						
CO	98.3	1.0	2365.4	2373.9	351.9	7.4
HC	671.0	86.9	101.6	77.2	58.4	9.6
NOX+	31.4	39.5	317.9	311.0	252.7	254.2
OIL TEMPERATURE, F	218	218	205	205	231	231
OIL PRESSURE, PSI	50	50	52	52	50	50
COOLANT TEMPERATURE, F	170	170	172	172	180	180
EXHAUST PRESSURE, IN. H2O	6.0	2.0	35.0	23.0	30.0	22.0
EXHAUST TEMPERATURE, F	764	1060	1308	1151	1306	1147

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	97.1	97.2	98.1	98.2	99.1	99.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.2	746.2	746.2	746.2	746.2	746.2
HUMIDITY, GRAINS/LB	58	58	58	58	58	58
TEMPERATURE, F	72	72	72	72	72	72
ENGINE SPEED, RPM	2500	2500	2500	2500	2500	2500
TORQUE, FT-LB	72.4	72.4	45.3	45.3	4.0	4.0
POWER, BHP*	34.1	34.1	21.3	21.3	1.9	1.9
FUEL RATE, LB/HR	16.8	16.9	14.6	14.9	8.9	8.7
IGNITION TIMING, DEG BTDC	36.0	36.0	36.0	36.0	36.0	36.0
MANIFOLD VACUUM, IN HG	9.0	9.0	11.0	11.0	18.0	18.0
THROTTLE ANGLE, DEG	13.0	13.0	11.0	11.0	7.0	7.0
INTAKE MAN. TEMP., F	216	216	204	204	196	196
CONCENTRATIONS, DRY BASIS						
CO, %	.0073	.0024	.1036	.0024	.1650	.0024
CO2, %	13.27	13.53	12.38	13.14	11.01	12.75
O2, %	1.75	1.50	3.13	2.08	5.13	2.75
HC, PPMC	1930	455	8452	1701	19485	3390
NOX, PPM	1138	1125	500	563	195	260
AIR/FUEL RATIO	15.91	15.89	16.14	16.18	16.37	16.50
EMISSION RATES, G/HR						
CO	8.0	2.7	101.1	2.4	100.7	1.4
HC	106.7	25.2	414.3	84.8	597.4	100.6
NOX+	191.0	188.9	74.4	85.2	18.1	23.4
OIL TEMPERATURE, F	237	237	232	232	232	232
OIL PRESSURE, PSI	50	50	50	50	50	50
COOLANT TEMPERATURE, F	178	178	174	174	174	174
EXHAUST PRESSURE, IN. H2O	16.0	11.0	15.0	10.0	10.0	4.0
EXHAUST TEMPERATURE, F	1124	994	1075	1026	964	1080

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	100.1	100.2	101.1	101.2	102.1	102.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.2	746.2	746.2	746.2	746.2	746.2
HUMIDITY, GRAINS/LB	58	58	58	58	58	58
TEMPERATURE, F	74	74	74	74	72	72
ENGINE SPEED, RPM	3000	3000	3000	3000	3000	3000
TORQUE, FT-LB	129.0	129.0	103.0	103.0	69.0	69.0
POWER, BHP*	73.0	73.0	58.3	58.3	39.0	39.0
FUEL RATE, LB/HR	34.2	33.7	29.2	29.1	20.5	20.9
IGNITION TIMING, DEG BTDC	14.0	14.0	14.0	14.0	32.0	32.0
MANIFOLD VACUUM, IN HG	3.5	3.5	4.5	4.5	9.5	9.5
THROTTLE ANGLE, DEG	31.0	31.0	26.0	26.0	16.0	16.0
INTAKE MAN. TEMP., F	198	198	225	225	231	231
CONCENTRATIONS, DRY BASIS						
CO, %	1.6155	1.6019	.1325	.0024	.0097	.0024
CO2, %	13.53	13.67	13.80	13.94	13.40	13.67
O2, %	.13	.05	1.00	.98	1.63	1.33
HC, PPMC	1120	891	285	61	1648	285
NOX, PPM	1088	1100	1063	1088	1250	1250
AIR/FUEL RATIO	14.11	14.10	15.46	15.53	15.85	15.78
EMISSION RATES, G/HR						
CO	3191.7	3112.2	244.4	4.5	13.0	3.3
HC	111.1	87.0	26.4	5.6	110.4	19.3
NOX+	327.7	325.8	298.9	306.8	254.1	257.2
OIL TEMPERATURE, F	242	242	252	252	250	250
OIL PRESSURE, PSI	50	50	49	49	49	49
COOLANT TEMPERATURE, F	176	176	180	180	176	176
EXHAUST PRESSURE, IN. H2O	46.0	33.0	42.0	30.0	22.0	15.0
EXHAUST TEMPERATURE, F	1375	1208	1400	1217	1207	1053

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	103.1	103.2	104.1	104.2	105.1	105.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.2	746.2	746.2	746.2	746.5	746.5
HUMIDITY, GRAINS/LB	58	58	58	58	61	61
TEMPERATURE, F	72	72	72	72	74	74
ENGINE SPEED, RPM	3000	3000	3000	3000	3300	3300
TORQUE, FT-LB	43.0	43.0	4.0	4.0	118.0	118.0
POWER, BHP*	24.3	24.3	2.3	2.3	73.4	73.4
FUEL RATE, LB/HR	17.2	17.0	11.9	11.6	38.9	38.4
IGNITION TIMING, DEG BTDC	34.0	34.0	35.0	35.0	12.0	12.0
MANIFOLD VACUUM, IN HG	11.0	11.0	15.5	15.5	3.5	3.5
THROTTLE ANGLE, DEG	14.0	14.0	8.5	8.5	32.0	32.0
INTAKE MAN. TEMP., F	224	224	214	214	156	156
CONCENTRATIONS, DRY BASIS						
CO, %	.0121	.0024	.1890	.0024	2.1608	2.2995
CO2, %	12.88	13.53	11.01	12.88	13.27	13.27
O2, %	2.25	1.63	5.13	2.63	.18	.13
HC, PPMC	7920	1479	27840	3960	1149	978
NOX, PPM	575	625	95	150	750	788
AIR/FUEL RATIO	15.58	15.84	15.38	16.32	13.90	13.84
EMISSION RATES, G/HR						
CO	13.4	2.7	145.6	1.9	4779.4	4993.6
HC	440.3	82.2	1077.2	155.5	127.7	106.6
NOX+	97.0	105.5	11.2	17.9	256.1	264.1
OIL TEMPERATURE, F	247	247	244	244	204	204
OIL PRESSURE, PSI	49	49	49	49	50	50
COOLANT TEMPERATURE, F	176	176	176	176	173	173
EXHAUST PRESSURE, IN. H2O	20.0	11.0	15.0	8.0	56.0	40.0
EXHAUST TEMPERATURE, F	1148	1064	1055	1168	1385	1210

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	106.1	106.2	107.1	107.2	108.1	108.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.5	746.5	746.5	746.5	746.5	746.5
HUMIDITY, GRAINS/LB	61	61	61	61	61	61
TEMPERATURE, F	76	76	75	75	72	72
ENGINE SPEED, RPM	3300	3300	3300	3300	3300	3300
TORQUE, FT-LB	94.0	94.0	63.0	63.0	39.0	39.0
POWER, BHP*	58.6	58.6	39.2	39.2	24.2	24.2
FUEL RATE, LB/HR	31.9	32.0	22.2	22.0	17.6	17.5
IGNITION TIMING, DEG BTDC	12.5	12.5	34.0	34.0	35.0	35.0
MANIFOLD VACUUM, IN HG	4.5	4.5	9.5	9.5	12.0	12.0
THROTTLE ANGLE, DEG	29.0	29.0	17.0	17.0	12.0	12.0
INTAKE MAN. TEMP., F	222	222	233	233	227	227
CONCENTRATIONS, DRY BASIS						
CO, %	.1420	.0024	.1060	.0024	.1277	.0024
CO2, %	13.80	14.08	13.53	13.67	12.88	13.53
O2, %	1.05	.93	1.63	1.50	2.50	1.75
HC, PPMC	160	38	626	205	7926	1479
NOX, PPM	963	1038	1338	1300	463	463
AIR/FUEL RATIO	15.50	15.49	15.91	15.91	15.69	15.92
EMISSION RATES, G/HR						
CO	287.1	5.0	153.3	3.5	145.3	2.8
HC	16.2	3.8	45.5	14.8	452.9	85.0
NOX+	300.5	324.4	298.7	288.0	81.3	81.7
OIL TEMPERATURE, F	242	242	254	254	254	254
OIL PRESSURE, PSI	49	49	49	49	49	49
COOLANT TEMPERATURE, F	175	175	178	178	178	178
EXHAUST PRESSURE, IN. H2O	50.0	36.0	25.0	17.0	20.0	12.0
EXHAUST TEMPERATURE, F	1458	1270	1251	1096	1174	1096

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	109.1	109.2	110.1	110.2	111.1	111.2
TEST DATE	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77	4/21/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.5	746.5	746.5	746.5	746.5	746.5
HUMIDITY, GRAINS/LB	61	61	61	61	61	61
TEMPERATURE, F	72	72	74	74	74	74
ENGINE SPEED, RPM	3300	3300	3600	3600	3600	3600
TORQUE, FT-LB	9.0	9.0	111.0	111.0	88.8	88.8
POWER, BHP*	5.6	5.6	75.4	75.4	60.3	60.3
FUEL RATE, LB/HR	13.7	12.9	40.6	41.0	33.4	33.7
IGNITION TIMING, DEG BTDC	35.0	35.0	12.0	12.0	12.0	12.0
MANIFOLD VACUUM, IN HG	15.2	15.2	4.0	4.0	4.5	4.5
THROTTLE ANGLE, DEG	9.0	9.0	33.0	33.0	29.0	29.0
INTAKE MAN. TEMP., F	214	214	210	210	234	234
CONCENTRATIONS, DRY BASIS						
CO, %	.2011	.0049	2.1345	2.4155	.1132	.0024
CO2, %	11.44	13.14	13.40	13.27	13.80	13.94
O2, %	4.75	2.25	.25	.13	1.25	1.23
HC, PPMC	19007	3175	1064	834	86	29
NOX, PPM	120	180	925	900	1013	1038
AIR/FUEL RATIO	16.08	16.11	13.98	13.81	15.67	15.71
EMISSION RATES, G/HR						
CO	184.4	4.2	4953.7	5585.4	242.3	5.3
HC	875.1	135.9	124.0	96.9	9.2	3.1
NOX+	17.0	23.7	331.3	321.2	334.7	346.2
OIL TEMPERATURE, F	251	251	257	257	271	271
OIL PRESSURE, PSI	49	49	47	47	46	46
COOLANT TEMPERATURE, F	174	174	176	176	180	180
EXHAUST PRESSURE, IN. H2O	16.0	8.0	66.0	47.0	57.0	40.0
EXHAUST TEMPERATURE, F	1094	1168	1450	1277	1488	1290

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	112.1	112.2	113.1	113.2	114.1	114.2
TEST DATE	4/21/77	4/21/77	4/22/77	4/22/77	4/22/77	4/22/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	746.5	746.5	745.6	745.6	745.6	745.6
HUMIDITY, GRAINS/LB	61	61	59	59	59	59
TEMPERATURE, F	74	74	72	72	72	72
ENGINE SPEED, RPM	3600	3600	3600	3600	3600	3600
TORQUE, FT-LB	59.2	59.2	37.0	37.0	2.0	2.0
POWER, BHP*	40.2	40.2	25.1	25.1	1.4	1.4
FUEL RATE, LB/HR	23.1	22.9	21.2	21.3	15.1	15.2
IGNITION TIMING, DEG BTDC	34.0	34.0	36.0	36.0	36.0	36.0
MANIFOLD VACUUM, IN HG	10.0	10.0	11.0	11.0	14.8	14.8
THROTTLE ANGLE, DEG	18.0	18.0	14.5	14.5	10.0	10.0
INTAKE MAN TEMP., F	232	232	186	187	207	207
CONCENTRATIONS, DRY BASIS						
CO, %	.1229	.0024	.1420	.0024	.2354	.0049
CO2, %	13.40	13.67	12.62	13.40	11.66	13.40
O2, %	1.75	1.50	2.50	1.40	3.88	1.40
HC, PPMC	2161	570	9885	1932	21850	4263
NOX, PPM	1263	1213	575	625	155	215
AIR/FUEL RATIO	15.82	15.87	15.48	15.63	15.11	15.35
EMISSION RATES, G/HR						
CO	184.4	3.6	193.1	3.3	224.6	4.7
HC	162.9	42.5	674.9	132.5	1047.0	205.6
NOX+	292.5	278.1	119.5	130.5	22.6	31.6
OIL TEMPERATURE, F	271	271	230	231	246	247
OIL PRESSURE, PSI	46	46	49	49	48	48
COOLANT TEMPERATURE, F	175	175	172	172	174	174
EXHAUST PRESSURE, IN. H2O	30.0	18.0	38.0	17.0	19.0	10.0
EXHAUST TEMPERATURE, F	1272	1134	1202	1164	1141	1231

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	115.1	115.2	116.1	116.2	117.1	117.2
TEST DATE	4/22/77	4/22/77	4/22/77	4/22/77	4/22/77	4/22/77
FUEL CODE	7619	7619	7619	7619	7619	7619
BAROMETER, MMHG	745.6	745.6	745.6	745.6	745.6	745.6
HUMIDITY, GRAINS/LB	53	53	53	53	53	53
TEMPERATURE, F	81	81	74	74	72	72
ENGINE SPEED, RPM	1700	1700	1700	1700	1700	1700
TORQUE, FT-LB	134.0	134.0	71.0	71.0	44.8	44.8
POWER, BHP*	43.2	43.2	22.7	22.7	14.3	14.3
FUEL RATE, LB/HR	20.8	20.8	11.8	11.6	8.5	8.4
IGNITION TIMING, DEG BTDC	16.0	16.0	36.0	36.0	37.0	37.0
MANIFOLD VACUUM, IN HG	1.5	1.5	10.5	10.5	16.6	16.6
THROTTLE ANGLE, DEG	29.0	29.0	10.0	10.0	5.5	5.5
INTAKE MAN. TEMP., F	177	177	206	206	156	156
CONCENTRATIONS, DRY BASIS						
CO, %	2.0086	1.5635	.0073	.0024	.0655	.0024
CO2, %	13.01	13.53	12.75	13.14	13.01	13.14
O2, %	.50	.13	2.65	2.13	1.75	1.63
HC, PPMC	1690	517	4520	851	9915	397
NOX, PPM	1025	650	725	775	2025	1913
AIR/FUEL RATIO	14.11	14.18	16.30	16.32	15.03	16.05
EMISSION RATES, G/HR						
CO	2415.8	1882.2	5.8	1.9	34.4	1.4
HC	102.1	31.2	179.5	33.3	261.3	11.1
NOX+	183.6	116.6	85.4	89.9	158.3	158.8
OIL TEMPERATURE, F	200	200	212	212	188	188
OIL PRESSURE, PSI	52	52	50	50	52	52
COOLANT TEMPERATURE, F	172	172	174	174	172	172
EXHAUST PRESSURE, IN. H2O	21.0	13.0	10.0	6.0	5.0	2.0
EXHAUST TEMPERATURE, F	1134	1021	958	864	844	713

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

ENGINE: 1977 CHRYSLER 225CID 6-CYLINDER

TEST NUMBER	118.1	118.2	119.1	119.2
TEST DATE	4/22/77	4/22/77	4/22/77	4/22/77
FUEL CODE	7619	7619	7619	7619
BAROMETER, MMHG	745.6	745.6	745.6	745.6
HUMIDITY, GRAINS/LB	53	53	53	53
TEMPERATURE, F	74	74	74	74
ENGINE SPEED, RPM	2000	2000	2000	2000
TORQUE, FT-LB	134.0	134.0	107.0	107.0
POWER, BHP*	50.5	50.5	40.3	40.3
FUEL RATE, LB/HR	22.5	22.2	18.9	18.6
IGNITION TIMING, DEG BTDC	16.0	16.0	15.0	15.0
MANIFOLD VACUUM, IN HG	2.5	2.5	5.0	5.0
THROTTLE ANGLE, DEG	26.0	26.0	19.0	19.0
INTAKE MAN. TEMP., F	202	202	201	201
CONCENTRATIONS, DRY BASIS				
CO, %	1.1876	.7000	.1890	.0286
CO2, %	13.53	14.08	13.94	14.08
O2, %	.49	.05	.88	.75
HC, PPMC	1260	287	1172	194
NOX, PPM	1175	513	800	825
AIR/FUEL RATIO	14.52	14.52	15.24	15.33
EMISSION RATES, G/HR				
CO	1585.5	919.4	222.5	33.3
HC	84.5	18.9	69.3	11.4
NOX+	233.6	100.4	140.3	142.9
OIL TEMPERATURE, F	217	217	208	208
OIL PRESSURE, PSI	50	50	50	50
COOLANT TEMPERATURE, F	177	177	177	177
EXHAUST PRESSURE, IN. H2O	25.0	17.0	20.0	13.0
EXHAUST TEMPERATURE, F	1211	1111	1194	1037

* CORRECTED SAE J816B
\+ CORRECTED FOR HUMIDITY

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